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OCT - 6 2014

Raymond Jones
President
Carbon Oak, Inc.
401 Franklin Street
Huntsville, AL 35801

RE: Draft Permit
Thunder Oaks Mine
NPDES Permit No. AL0081817
De Kalb County (049)

Dear Mr. Jones:

Transmitted herein is a draft of the above referenced permit. Please review the enclosed draft permit carefully. Please submit any comments on the draft permit to the Department within 30 days from the date of receipt of this letter.

Since the Department has made a tentative decision to issue the above referenced permit, ADEM Admin. Code r. 335-6-6-.21 requires a public notice of the draft permit followed by a period of at least 30 days for public comment before the permit can be issued.

The United States Environmental Protection Agency will also receive the draft permit for review during the 30-day public comment period.

Any mining, processing, construction, land disturbance, or other regulated activity proposed to be authorized by this draft permit is prohibited prior to the effective date of the formal permit. Any mining or processing activity within the drainage basin associated with each permitted outfall which is conducted prior to Departmental receipt of certification from a professional engineer licensed to practice in the State of Alabama, that the Pollution Abatement/Prevention Plan was implemented according to the design plan, or notification from the Alabama Surface Mining Commission that the sediment control structures have been certified, is prohibited.

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
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Mobile Branch
2204 Perimeter Road
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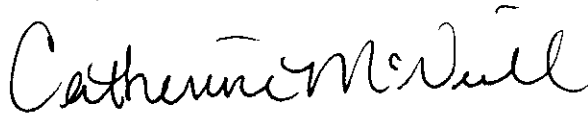
Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

Please be aware that, if you are not already participating in the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs), your permit will require you to apply for participation in the E2 DMR system within 180 days of the effective date of the permit unless valid justification as to why you cannot participate is submitted in writing. The E2 DMR system allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. The Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes> or you may obtain a hard copy by submitting a written request or by emailing e2admin@adem.alabama.gov.

The Alabama Department of Environmental Management encourages you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.

Should you have any questions concerning this matter, please contact Michael T. Bergh by email at mtbergh@adem.state.al.us or by phone at (334) 724-4238.

Sincerely,



Catherine McNeill, Chief
Mining and Natural Resources
Stormwater Management Branch
Water Division

CAM/mtb File: DPER/45265

Enclosure

cc: Michael T. Bergh, ADEM
Environmental Protection Agency Region IV
Alabama Department of Conservation and Natural Resources
U.S. Fish and Wildlife Service
Alabama Historical Commission
Advisory Council on Historic Preservation
Alabama Surface Mining Commission



NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM INDIVIDUAL PERMIT

PERMITTEE: Carbon Oak, Inc.
401 Franklin Street
Huntsville, AL 35801

FACILITY LOCATION: Thunder Oaks Mine
1101 County Road 683
Sylvania, AL 35988
De Kalb County
T6S, R8E, S2, S3, S10, and S11

PERMIT NUMBER: AL0081817

<u>DSN</u>	<u>RECEIVING STREAM</u>	<u>DSN</u>	<u>RECEIVING STREAM</u>
001-1	Wolf Branch	002-1	Wolf Branch
003-1	Wolf Branch	004-1	Wolf Branch
005-1	Bengis Creek	006-1	Bengis Creek
007-1	Bengis Creek	008-1	Bengis Creek
009-1	Bengis Creek	010-1	Bengis Creek
011-1	Unnamed Tributary to Bengis Creek	012-1	Unnamed Tributary to Bengis Creek

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-16, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

**** DRAFT ****

Alabama Department of Environmental Management

MINING AND NATURAL RESOURCE SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

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PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Active Mining Limitations and Monitoring Requirements

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. Except as provided in Parts I.A.2. and 3., discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency ¹
Specific Conductance 00095	-----	Report μS/cm	Report μS/cm	Grab	2/Month
Sulfate (As S) 00154	-----	Report mg/L	Report mg/L	Grab	2/Month
pH 00400	6.0 s.u.	-----	8.5 s.u.	Grab	2/Month
pH ² 00400	6.0 s.u.	-----	10.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-----	35.0 mg/L	70.0 mg/L	Grab	2/Month
Iron, Total (As Fe) 01045	-----	3.0 mg/L	6.0 mg/L	Grab	2/Month
Manganese, Total (As Mn) ³ 01055	-----	2.0 mg/L	4.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant ⁴ 50050	-----	Report MGD	Report MGD	Instantaneous	2/Month
Toxicity, Ceriodaphnia Acute ⁵ 61425	-----	-----	0 pass(0)/fail(1)	Grab	1/Quarter
Toxicity, Ceriodaphnia Chronic ⁶ 61426	-----	-----	0 pass(0)/fail(1)	Grab	1/Quarter
Toxicity, Pimephales Acute ⁵ 61427	-----	-----	0 pass(0)/fail(1)	Grab	1/Quarter
Toxicity, Pimephales Chronic ⁶ 61428	-----	-----	0 pass(0)/fail(1)	Grab	1/Quarter
Solids, Total Dissolved (TDS) 70296	-----	Report mg/L	Report mg/L	Grab	1/Quarter

¹ See Part I.C.2. for further measurement frequency requirements.

² See Part IV.D. for pH Exemption Discharge Limitations.

³ See Part IV.E. for Manganese Exemption Discharge Limitations.

⁴ Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

⁵ See Part IV.F. for Effluent Toxicity Limitations and Biomonitoring Requirements for Acute Toxicity.

⁶ See Part IV.G. for Effluent Toxicity Limitations and Biomonitoring Requirements for Chronic Toxicity.

2. Precipitation Exemption Limitations and Monitoring Requirements⁷

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. During periods of applicable 24-hour precipitation events for which the Permittee claims an exemption of standard mining limits as provided by Part IV.B., such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency ⁸
Specific Conductance 00095	-----	Report µS/cm	Report µS/cm	Grab	2/Month
Sulfate (As S) 00154	-----	Report mg/L	Report mg/L	Grab	2/Month
pH 00400	6.0 s.u.	-----	9.0 s.u.	Grab	2/Month
Solids, Settleable ⁹ 00545	-----	-----	0.5 mL/L	Grab	2/Month
Iron, Total (As Fe) ¹⁰ 01045	-----	-----	7.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant ¹¹ 50050	-----	Report MGD	Report MGD	Instantaneous	2/Month
Solids, Total Dissolved (TDS) 70296	-----	Report mg/L	Report mg/L	Grab	1/Quarter

⁷ See Part IV.B. for Precipitation Event Discharge Limitations.

⁸ See Part I.C.2. for further measurement frequency requirements.

⁹ The discharge limitation for Settleable Solids is not applicable for precipitation events greater than a 10-year, 24-hour precipitation event.

¹⁰ The discharge limitation for Total Iron (As Fe) is only applicable for precipitation events less than or equal to a 2-year, 24-hour precipitation event.

¹¹ Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

3. Post Mining Limitations and Monitoring Requirements¹²

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. For those outfalls which the Department has granted written approval pursuant to Part IV.C., such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency ¹³
Specific Conductance 00095	-----	Report μS/cm	Report μS/cm	Grab	1/Month
Sulfate (As S) 00154	-----	Report mg/L	Report mg/L	Grab	1/Month
pH 00400	6.0 s.u.	-----	8.5 s.u.	Grab	1/Month
Solids, Settleable 00545	-----	-----	0.5 mL/L	Grab	1/Month
Flow, In Conduit or Thru Treatment Plant ¹⁴ 50050	-----	Report MGD	Report MGD	Instantaneous	1/Month
Solids, Total Dissolved (TDS) 70296	-----	Report mg/L	Report mg/L	Grab	1/Quarter

B. REQUIREMENTS TO ACTIVATE A PROPOSED MINING OUTFALL

1. Discharge from any point source identified on Page 1 of this Permit which is a proposed outfall is not authorized by this Permit until the outfall has been constructed and certification received by the Department from a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed in accordance with plans and specifications approved by the ASMC, if applicable. This requirement shall not apply to pumped discharges from the underground works of underground coal mines where no surface structure is required by the ASMC, provided the Department is notified in writing of the completion or installation of such facilities, and the pumped discharges will meet permit effluent limits without treatment.
2. Certification required by Part I.B.1. shall be submitted on a completed ADEM Form 432. The certification shall include the latitude and longitude of the constructed and certified outfall.
3. Discharge monitoring and Discharge Monitoring Report (DMR) reporting requirements described in Part I.C. of this Permit do not apply to point sources that have not been constructed and certified.
4. Upon submittal of the certification required by Part I.B.1. to the Department, all monitoring and DMR submittal requirements shall apply to the constructed and certified outfall.

¹² See Part IV.C. for Post-Mining Discharge Limitations.

¹³ See Part I.C.2. for further measurement frequency requirements.

¹⁴ Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

C. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Sampling Schedule and Frequency

- a. Except as provided in Parts IV.B. and C., the Permittee shall collect samples of the discharge from each constructed and certified point source identified on Page 1 of this Permit and described more fully in the Permittee's application, at the frequency specified in Part I.A. Analysis of the samples shall be conducted for the parameters specified in Part I.A.
- b. For each permitted, constructed, and certified point source which results from direct pumped drainage from the underground works of an underground coal mine or from surface drainage, if the final effluent is pumped in order to discharge (e.g. incised ponds, old highwall cuts, old pit areas or depressions), at least one grab sample from the permitted point source shall be obtained and analyzed each quarterly (three month) monitoring period if a discharge occurs at any time during the quarterly monitoring period.
- c. The Permittee may increase the frequency of sampling listed in Parts I.C.1.a and I.C.1.b; however, all sampling results must be reported to the Department and included in any calculated results submitted to the Department in accordance with this Permit.

2. Measurement Frequency

Measurement frequency requirements found in Part I.A. shall mean:

- a. A measurement frequency of one day per week shall mean sample collection on any day of discharge which occurs every calendar week.
- b. A measurement frequency of two days per month shall mean sample collection on any day of discharge which occurs every other week, but need not exceed two sample days per month.
- c. A measurement frequency of one day per month shall mean sample collection on any day of discharge which occurs during each calendar month.
- d. A measurement frequency of one day per quarter shall mean sample collection on any day of discharge which occurs during each calendar quarter.
- e. A measurement frequency of one day per six months shall mean sample collection on any day of discharge which occurs during the period of January through June and during the period of July through December.
- f. A measurement frequency of one day per year shall mean sample collection on any day of discharge which occurs during each calendar year.

3. Monitoring Schedule

The Permittee shall conduct the monitoring required by Part I.A. in accordance with the following schedule:

- a. MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this Permit and every month thereafter. More frequently than monthly and monthly monitoring may be done anytime during the month, unless restricted elsewhere in this Permit, but the results should be reported on the last Discharge

Monitoring Report (DMR) due for the quarter (i.e., with the March, June, September, and December DMRs).

- b. QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The Permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this Permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this Permit, but the results should be reported on the last DMR due for the quarter (i.e., with the March, June, September, and December DMRs).
- c. SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The Permittee shall conduct the semiannual monitoring during the first complete semiannual calendar period following the effective date of this Permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this Permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., with the June and December DMRs).
- d. ANNUAL MONITORING shall be conducted at least once during the period of January through December. The Permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this Permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this Permit, but it should be reported on the December DMR.

4. Sampling Location

Unless restricted elsewhere in this Permit, samples collected to comply with the monitoring requirements specified in Part I.A. shall be collected at the nearest accessible location just prior to discharge and after final treatment, or at an alternate location approved in writing by the Department.

5. Representative Sampling

Sample collection and measurement actions taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this Permit.

6. Test Procedures

For the purpose of reporting and compliance, Permittees shall use one of the following procedures:

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136, guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h), and ADEM Standard Operating Procedures. If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this Permit the Permittee shall use the newly approved method.

- b. For pollutant parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the Permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the Permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures identified in Parts I.C.6.a. and b. shall be reported on the Permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

7. Recording of Results

For each measurement or sample taken pursuant to the requirements of this Permit, the Permittee shall record the following information:

- a. The facility name and location, point source number, date, time, and exact place of sampling or measurements;
- b. The name(s) of person(s) who obtained the samples or measurements;
- c. The dates and times the analyses were performed;
- d. The name(s) of the person(s) who performed the analyses;
- e. The analytical techniques or methods used including source of method and method number; and
- f. The results of all required analyses.

8. Routine Inspection by Permittee

- a. The Permittee shall inspect all point sources identified on Page 1 of this Permit and described more fully in the Permittee's application and all treatment or control facilities or systems used by the Permittee to achieve compliance with the terms and conditions of this Permit at least as often as the applicable sampling frequency specified in Part I.C.1 of this Permit.
- b. If required by the Director, the Permittee shall maintain a written log for each point source identified on Page 1 of this Permit and described more fully in the Permittee's application in which the Permittee shall record the following information:

- (1) The date and time the point source and any associated treatment or control facilities or systems were inspected by the Permittee;
- (2) Whether there was a discharge from the point source at the time of inspection by the Permittee;
- (3) Whether a sample of the discharge from the point source was collected at the time of inspection by the Permittee;
- (4) Whether all associated treatment or control facilities or systems appeared to be in good working order and operating as efficiently as possible, and if not, a description of the problems or deficiencies; and
- (5) The name and signature of the person performing the inspection of the point source and associated treatment or control facilities or systems.

9. Records Retention and Production

- a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the above reports or the application for this Permit, for a period of at least three (3) years from the date of the sample collection, measurement, report, or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA, AEMA, and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.
- b. All records required to be kept for a period of three (3) years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

10. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this Permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The Permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

D. DISCHARGE REPORTING REQUIREMENTS

1. Requirements for Reporting of Monitoring

- a. Monitoring results obtained during the previous three (3) months shall be summarized for each month on a Discharge Monitoring Report (DMR) Form approved by the Department, and submitted to the Department so that it is received by the Director no later than the 28th day of the month following the quarterly reporting period (i.e., on the 28th day of January, April, July, and October of each year).

- b. The Department is utilizing a web-based electronic environmental (E2) reporting system for submittal of DMRs. The E2 DMR system allows ADEM to electronically validate, acknowledge receipt, and upload data to the state's central wastewater database. This improves the accuracy of reported compliance data and reduces costs to both the regulated community and ADEM. If the Permittee is not already participating in the E2 DMR system, **the Permittee must apply for participation in the E2 DMR system within 180 days of the effective date of this permit unless valid justification as to why they cannot participate is submitted in writing. After 180 days, hard copy DMRs may be used only with written approval from the Department.** To participate in the E2 DMR system, the Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>. If the electronic environmental (E2) reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the E2 system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 system resuming operation, the Permittee shall enter the data into the E2 reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date). If a permittee is allowed to submit via the US Postal Service, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit. If the Permittee, using approved analytical methods as specified in Part I.C.6. monitors any discharge from a point source identified on Page 1 of this Permit and describe more fully in the Permittee's application more frequently than required by this Permit; the results of such monitoring shall be included in the calculation and reporting of values on the DMR Form, and the increased frequency shall be indicated on the DMR Form. In the event no discharge from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application occurs during a monitoring period, the Permittee shall report "No Discharge" for such period on the appropriate DMR Form.
- c. The Permittee shall report "No Discharge During Quarterly Monitoring Period" on the appropriate DMR Form for each point source receiving pumped discharges pursuant to Part I.C.1.b. provided that no discharge has occurred at any time during the entire quarterly (three month) monitoring period.
- d. Each DMR Form submitted by the Permittee to the Department in accordance with Parts I.D.1.a and b. must be legible and bear an original signature or electronic signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit.
- e. All reports and forms required to be submitted by this Permit, the AWPCA, and the Department's rules and regulations, shall be signed by a "responsible official" of the Permittee as defined in ADEM Admin. Code r. 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Admin. Code r. 335-6-6-.09 and shall bear the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the

information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- f. All DMRs, reports and forms required to be submitted by this Permit, the AWPCA and the Department's rules and regulations, shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

- g. Unless authorized in writing by the Department, approved reporting forms required by this Permit or the Department are not to be altered, and if copied or reproduced, must be consistent in format and identical in content to the ADEM approved form. Unauthorized alteration, falsification, or use of incorrectly reproduced forms constitutes noncompliance with the requirements of this Permit and may significantly delay processing of any request, result in denial of the request, result in permit termination, revocation, suspension, modification, or denial of a permit renewal application, or result in other enforcement action.
- h. If this Permit is a reissuance, then the Permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Parts I.D.1.a and b.

2. Requirements for Outfall Certification Summary Submittal

The Permittee shall submit a summary of outfalls identified on Page 1 of this Permit so that it is received by the Director with the required DMRs no later than the 28th day of the month following the quarterly reporting period (i.e., on the 28th day of January, April, July, and October of each year). This Outfall Certification Summary shall indicate whether each outfall identified on Page 1 of this Permit has been certified and, if so, it shall include the date for each certification as well as the latitude and longitude of the certified outfall. If any outfall identified on Page 1 of this Permit has received written approval from the Department pursuant to Part IV.C. of this Permit stating that the Permittee may utilize the Post-Mining Discharge Limitations specified in Part I.A.3., then the list of outfalls shall include the date of the Post-Mining Discharge Limitations approval. If any outfall identified on Page 1 of this Permit has been released from monitoring requirements as provided in Part I.D.4. of this Permit, then the list of outfalls shall include the date of the monitoring requirement release. The Outfall Certification Summary shall be submitted in a format approved or developed by the Department. This submittal is only required when DMR submittal is required by Part I.B.4.

3. Noncompliance Notification

- a. The Permittee must notify the Department if, for any reason, the Permittee's discharge:

- (1) Potentially threatens human health or welfare;
- (2) Potentially threatens fish or aquatic life;
- (3) Causes an in-stream water quality criterion to be exceeded;
- (4) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. §1317(a);
- (5) Contains a quantity of a hazardous substance which has been determined may be harmful to the public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. §1321(b)(4); or
- (6) Exceeds any discharge limitation for an effluent parameter as a result of an unanticipated bypass or upset.

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects of such discharge to the Director within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit to the Director a written report as provided in Part I.D.3.c., no later than five (5) days after becoming aware of the occurrence of such discharge.

- b. If for any reason, the Permittee's discharge does not comply with any limitation of this Permit, the Permittee shall submit a written report to the Director, as provided in Part I.D.3.c. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Part I.D.1. of this Permit after becoming aware of the occurrence of such noncompliance.
- c. Form 401 or Form 421 must be submitted to the Director in accordance with Parts I.D.3.a. and b. The completed form must document the following information:
 - (1) A description of the discharge and cause of noncompliance;
 - (2) The period of noncompliance, including exact dates, times, and duration of the noncompliance. If not corrected by the due date of the written report, then the Permittee is to state the anticipated timeframe that is expected to transpire before the noncompliance is resolved; and
 - (3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

4. Reduction, Suspension, or Termination of Monitoring and/or Reporting Requirements

- a. The Director may, with respect to any point source identified on Page 1 of this Permit and described more fully in the Permittee's application, authorize the Permittee to reduce, suspend, or terminate the monitoring and/or reporting required by this Permit upon the submission of a written request for such reduction, suspension, or termination by the Permittee provided:
 - (1) All mining, processing, or disturbance in the drainage basin(s) associated with the discharge has ceased and site access is adequately restricted or controlled to preclude unpermitted and unauthorized mining, processing, transportation, or associated operations/activity;

- (2) Unless waived in writing by the Department, the Permittee has been granted, in writing, a 100% Bond Release, by the Alabama Surface Mining Commission for all areas mined or disturbed in the drainage basin(s) associated with the discharge;
 - (3) The Permittee has certified to the Director that the 100% Bond Release has been granted by the Alabama Surface Mining Commission for all areas disturbed in the drainage basin(s) associated with the discharge;
 - (4) All surface effects of the mining activity such as fuel or chemical tanks, preparation plants or equipment, old tools or equipment, junk or debris, etc., must be removed and disposed of according to applicable state and federal regulations;
 - (5) The Permittee's request for termination of monitoring and reporting requirements contained in this Permit has been supported by monitoring data covering a period of at least six consecutive months or such longer period as is necessary to assure that the data reflect discharges occurring during varying seasonal climatological conditions;
 - (6) The Permittee has stated in its request that the samples collected and reported in the monitoring data submitted in support of the Permittee's request for monitoring termination or suspension are representative of the discharge and were collected in accordance with all Permit terms and conditions respecting sampling times (e.g., rainfall events) and methods and were analyzed in accordance with all Permit terms and conditions respecting analytical methods and procedures;
 - (7) The Permittee has certified that during the entire period covered by the monitoring data submitted, no chemical treatment of the discharge was provided;
 - (8) The Permittee's request has included the certification required by Part I.D.1.d. of this Permit; and
 - (9) The Permittee has certified to the Director in writing as part of the request, its compliance with (1) through (8) above.
- b. It remains the responsibility of the Permittee to comply with the monitoring and reporting requirements of this Permit until written authorization to reduce, suspend, or terminate such monitoring and/or reporting is received by the Permittee from the Director.

E. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The Permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The Permittee shall notify the Director, in writing, when all discharges from any point source(s) identified on Page 1 of this Permit and described more fully in the Permittee's application have permanently ceased.

3. Updating Information

- a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or officer(s) having the authority and responsibility to prevent and abate violations of the AWPCA, the AEMA, the Department's rules and regulations, and the terms and conditions of this Permit, in writing, no later than ten (10) days after such change. Upon request of the Director, the Permittee shall furnish the Director with an update of any information provided in the permit application.
- b. If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

- a. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, suspending, terminating, or revoking and reissuing this Permit, in whole or in part, or to determine compliance with this Permit. The Permittee shall also furnish to the Director upon request, copies of records required to be maintained by this Permit.
- b. The Permittee shall furnish to the Director upon request, within a reasonable time, available information (name, phone number, address, and site location) which identifies offsite sources of material or natural resources (mineral, ore, or other material such as iron, coal, coke, dirt, chert, shale, clay, sand, gravel, bauxite, rock, stone, etc.) used in its operation or stored at the facility.

F. SCHEDULE OF COMPLIANCE

The Permittee shall achieve compliance with the discharge limitations specified in Part I.A. of this Permit in accordance with the following schedule:

Compliance must be achieved by the effective date of this Permit.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

The Permittee shall at all times operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of this Permit.

2. Best Management Practices (BMPs)

- a. Unless otherwise authorized in writing by the Director, the Permittee shall provide a means of subsurface withdrawal for any discharge from each point source identified on Page I of this Permit and described more fully in the Permittee's application. Notwithstanding the above provision, a means of subsurface withdrawal need not be provided for any discharge caused by a 24-hour precipitation event greater than a 10-year, 24-hour precipitation event.
- b. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director has granted prior written authorization for dilution to meet water quality requirements.
- c. The Permittee shall minimize the contact of water with overburden, including but not limited to stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, sealing acid-forming and toxic-forming materials, and maximizing placement of waste materials in back-fill areas.
- d. The Permittee shall prepare, submit to the Department for approval, and implement a Best Management Practices (BMPs) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a potential for discharge, if so required by the Director. When submitted and approved, the BMP Plan shall become a part of this Permit and all requirements of the BMP Plan shall become requirements of this Permit.
- e. Spill Prevention, Control, and Management

The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan acceptable to the Department that is prepared and certified by a Professional Engineer (PE), registered in the State of Alabama, for all onsite petroleum product or other pollutant storage tanks or containers as required by applicable state (ADEM Admin. Code r. 335-6-6-.12 (r)) and federal (40 C.F.R. §§112.1-.7) regulations. The Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a ground or surface water of the State or a publicly or privately owned treatment works. Careful consideration should be applied for tanks or containers located near treatment ponds, water bodies, or high traffic areas. In most situations this would require construction of a containment system if the cumulative storage capacity of petroleum products or other pollutants at the facility is greater than 1320 gallons. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of

groundwater. Such containment systems shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided. The applicant shall maintain onsite or have readily available flotation booms to contain, and sufficient material to absorb, fuel and chemical spills and leaks. Soil contaminated by chemical spills, oil spills, etc., must be immediately cleaned up or be removed and disposed of in an approved manner.

- f. All surface drainage and storm water runoff which originate within or enters the Permittee's premises and which contains any pollutants or other wastes shall be discharged, if at all, from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application.
- g. The Permittee shall take all reasonable precautions to prevent any surface drainage or storm water runoff which originates outside the Permittee's premises and which contains any pollutants or other wastes from entering the Permittee's premises. At no time shall the Permittee discharge any such surface drainage or storm water runoff which enters the Permittee's premises if, either alone or in combination with the Permittee's effluent, the discharge would exceed any applicable discharge limitation specified in Part I.A. of this Permit.

3. Biocide Additives

- a. The Permittee shall notify the Director in writing not later than sixty (60) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in any cooling or boiler system(s) regulated by this Permit. Notification is not required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the Permittee. Such notification shall include:
 - (1) Name and general composition of biocide or chemical;
 - (2) 96-hour median tolerance limit data for organisms representative of the biota of the water(s) which the discharge(s) enter(s);
 - (3) Quantities to be used;
 - (4) Frequencies of use;
 - (5) Proposed discharge concentrations; and
 - (6) EPA registration number, if applicable.
- b. The use of any biocide or chemical additive containing tributyl tin, tributyl tin oxide, zinc, chromium, or related compounds in any cooling or boiler system(s) regulated by the Permit is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this Permit or in the application for this Permit or not exempted from notification under this Permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

4. Facility Identification

The Permittee shall clearly display prior to commencement of any regulated activity and until permit coverage is properly terminated, the name of the Permittee, entire NPDES permit number, facility or site name, and other descriptive information deemed appropriate by the Permittee at an easily accessible location(s) to adequately identify the site, unless approved otherwise in writing by the Department. The Permittee shall repair or replace the sign(s) as necessary upon becoming aware that the identification is missing or is unreadable due to age, vandalism, theft, weather, or other reason(s).

5. Removed Substances

Solids, sludges, filter backwash, or any other pollutants or other wastes removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department rules and regulations.

6. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facility, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Part I.A. of this Permit or any other terms or conditions of this Permit, cease, reduce, or otherwise control production and/or discharges until treatment is restored.

7. Duty to Mitigate

The Permittee shall promptly take all reasonable steps to minimize or prevent any violation of this Permit or to mitigate and minimize any adverse impact to waters resulting from noncompliance with any discharge limitation specified in Part I.A. of this Permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as is necessary to determine the nature and impact of the noncomplying discharge.

B. BYPASS AND UPSET

1. Bypass

- a. Any bypass is prohibited except as provided in Parts II.B.1.b. and c.
- b. A bypass is not prohibited if:
 - (1) It does not cause any applicable discharge limitation specified in Part I.A. of this Permit to be exceeded;
 - (2) The discharge resulting from such bypass enters the same receiving water as the discharge from the permitted outfall;
 - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system; and
 - (4) The Permittee monitors the discharge resulting from such bypass at a frequency, at least daily, sufficient to prove compliance with the discharge limitations specified in Part I.A. of this Permit.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Part I.A. of this Permit if:

- (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days, if possible, prior to the anticipated bypass or within 24 hours of an unanticipated bypass, the Permittee is granted such authorization, and Permittee complies with any conditions imposed by the Director to minimize any adverse impact to waters resulting from the bypass.
- d. The Permittee has the burden of establishing that each of the conditions of Parts II.B.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in Part II.B.1.a. and an exemption, where applicable, from the discharge limitations specified in Part I.A. of this Permit.

2. Upset

- a. Except as provided in Parts II.B.2.b. and c., a discharge which results from an upset need not meet the applicable discharge limitations specified in Part I.A. of this Permit if:
- (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director; and
 - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, design drawings, construction certification, maintenance records, weir flow measurements, dated photographs, rain gauge measurements, or other relevant evidence, demonstrating that:
 - (i) An upset occurred;
 - (ii) The Permittee can identify the specific cause(s) of the upset;
 - (iii) The Permittee's treatment facility was being properly operated at the time of the upset; and
 - (iv) The Permittee promptly took all reasonable steps to minimize any adverse impact to waters resulting from the upset.
- b. Notwithstanding the provisions of Part II.B.2.a., a discharge which is an overflow from a treatment facility or system, or an excess discharge from a point source associated with a treatment facility or system and which results from a 24-hour precipitation event larger than a 10-year, 24-hour precipitation event is not exempted from the discharge limitations specified in Part I.A. of this Permit unless:
- (1) The treatment facility or system is designed, constructed, and maintained to contain the maximum volume of wastewater which would be generated by the facility during a 24-hour period without an increase in volume from

precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event or to treat the maximum flow associated with these volumes.

In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the volume which would result from all areas contributing runoff to the individual treatment facility must be included (i.e., all runoff that is not diverted from the mining area and runoff which is not diverted from the preparation plant area); and

- (2) The Permittee takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow or excess discharge.
- c. The Permittee has the burden of establishing that each of the conditions of Parts II.B.2.a. and b. have been met to qualify for an exemption from the discharge limitations specified in Part I.A. of this Permit.

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

- a. Notwithstanding any other provisions of this Permit, if the permitted facility has not obtained or is not required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which was not certified to the Department on a form approved by the Department by a professional engineer, registered in the State of Alabama, as being designed, constructed, and in accordance with plans and specifications reviewed by the Department is prohibited; or
- b. Notwithstanding any other provisions of this Permit, if the permitted facility has obtained or is required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which is associated with a treatment facility which was not constructed and certified to the Alabama Surface Mining Commission pursuant to applicable provisions of said Commission's regulations, is prohibited until the Permittee submits to the Alabama Surface Mining Commission, certification by a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed in accordance with plans and specifications approved by the Alabama Surface Mining Commission. This requirement shall not apply to pumped discharges from the underground works of underground coal mines where no surface structure is required by the Alabama Surface Mining Commission, provided the Department is notified in writing of the completion or installation of such facilities, and the pumped discharges will meet permit effluent limits without treatment.

2. Permit Modification, Suspension, Termination, and Revocation

- a. This Permit may be modified, suspended, terminated, or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
 - (1) The violation of any term or condition of this Permit;
 - (2) The obtaining of this Permit by misrepresentation or the failure to disclose fully all relevant facts;

- (3) The submission of materially false or inaccurate statements or information in the permit application or reports required by the Permit;
 - (4) The need for a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
 - (5) The existence of any typographical or clerical errors or of any errors in the calculation of discharge limitations;
 - (6) The existence of material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
 - (7) The threat of the Permittee's discharge on human health or welfare; or
 - (8) Any other cause allowed by ADEM Admin. Code ch. 335-6-6.
- b. The filing of a request by the Permittee for modification, suspension, termination, or revocation and reissuance of this Permit, in whole or in part, does not stay any Permit term or condition of this Permit.

3. Requirements for Metals, Cyanide, and Phenols Monitoring and Reporting

- a. For all outfalls, the Permittee shall collect a sample of the discharge to be analyzed for antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and phenols no later six months following the effective date of the Permit. The analyses shall be submitted on EPA Form 2C and received by the Department no later than 28 days following six months after the effective date of the Permit.
- b. For all outfalls, should a discharge not occur within the first six months following the effective date of this Permit, the Permittee shall collect a sample of the discharge to be analyzed for antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and phenols no later than six months following the date of the first discharge. The analyses shall be submitted on EPA Form 2C and received by the Department no later than 28 days following six months after the first discharge.
- c. Parts II.C.3.a. and b. do not apply for any outfall that is represented by analyses conducted at a substantially similar outfall as indicated on EPA Form 2C or 2D.
- d. The Permit shall be reopened, if required, to address any new information resulting from the completion and submittal of the data referenced in Parts II.C.3.a. and b.

4. Automatic Expiration of Permits for New or Increased Discharges

- a. Except as provided by ADEM Admin. Code r. 335-6-6-.02(g) and 335-6-6-.05, if this Permit was issued for a new discharger or new source, it shall expire eighteen months after the issuance date if construction has not begun during that eighteen month period.
- b. Except as provided by ADEM Admin. Code r. 335-6-6-.02(g) and 335-6-6-.05, if any portion of this Permit was issued or modified to authorize the discharge of increased quantities of pollutants to accommodate the modification of an existing facility, that portion of this Permit shall expire eighteen months after this Permit's issuance if construction of the modification has not begun within eighteen month period.

c. Construction has begun when the owner or operator has:

- (1) Begun, or caused to begin as part of a continuous on-site construction program:
 - (i) Any placement, assembly, or installation of facilities or equipment; or
 - (ii) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
- (2) Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

d. The automatic expiration of this Permit for new or increased discharges if construction has not begun within the eighteen month period after the issuance of this Permit may be tolled by administrative or judicial stay.

5. Transfer of Permit

This Permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of this Permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership, or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership, or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership, or control, he may decide not to modify the existing Permit and require the submission of a new permit application.

6. Groundwater

Unless authorized on page 1 of this Permit, this Permit does not authorize any discharge to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

7. Property and Other Rights

This Permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of Federal, State, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the State or of the United States.

D. RESPONSIBILITIES

1. Duty to Comply

- a. The Permittee must comply with all terms and conditions of this Permit. Any permit noncompliance constitutes a violation of the AWPCA, AEMA, and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.
- b. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the FWPCA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the effluent standard, prohibition or requirement.
- c. For any violation(s) of this Permit, the Permittee is subject to a civil penalty as authorized by the AWPCA, the AEMA, the FWPCA, and Code of Alabama 1975, §§22-22A-1 et. seq., as amended, and/or a criminal penalty as authorized by Code of Alabama 1975, §22-22-1 et. seq., as amended.
- d. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of this Permit shall not be a defense for a Permittee in an enforcement action.
- e. Nothing in this Permit shall be construed to preclude or negate the Permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or local government permits, certifications, licenses, or other approvals.
- f. The discharge of a pollutant from a source not specifically identified in the permit application for this Permit and not specifically included in the description of an outfall in this Permit is not authorized and shall constitute noncompliance with this Permit.
- g. The Permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this Permit or to minimize or prevent any adverse impact of any permit violation.

2. Change in Discharge

- a. The Permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants, increase the quantity of a discharged pollutant, or that could result in an additional discharge point. This requirement also applies to pollutants that are not subject to discharge limitations in this Permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.
- b. The Permittee shall notify the Director as soon as it knows or has reason to believe that it has begun or expects to begin to discharge any pollutant listed as a toxic pollutant pursuant to Section 307(a) of the FWPCA, 33 U.S.C. §1317(a), any substance designated as a hazardous substance pursuant to Section 311(b)(2) of the FWPCA, 33 U.S.C. §1321(b)(2), any waste listed as a hazardous waste pursuant to Code of Alabama 1975, §22-30-10, or any other pollutants or other wastes which is not subject to any discharge limitations specified in Part I.A. of this Permit and was not reported in the Permittee's application, was reported in the Permittee's application in concentrations or mass rates lower than that which the Permittee expects to begin to be discharged, or has reason to believe has begun to be discharged.

3. Compliance with Toxic or Other Pollutant Effluent Standard or Prohibition

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Sections 301(b)(2)(C),(D),(E) and (F) of the FWPCA, 33 U.S.C. §1311(b)(2)(C),(D),(E), and (F); 304(b)(2) of the FWPCA, 33 U.S.C. §1314(b)(2); or 307(a) of the FWPCA, 33 U.S.C. §1317(a), for a toxic or other pollutant discharged by the Permittee, and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Part I.A. of this Permit or controls a pollutant not limited in Part I.A. of this Permit, this Permit shall be modified to conform to the toxic or other pollutant effluent standard or prohibition and the Permittee shall be notified of such modification. If this Permit has not been modified to conform to the toxic or other pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the authorization to discharge in this Permit shall be void to the extent that any discharge limitation on such pollutant in Part I.A. of this Permit exceeds or is inconsistent with the established toxic or other pollutant effluent standard or prohibition.

4. Compliance with Water Quality Standards and Other Provisions

- a. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this Permit will assure compliance with applicable water quality standards. However, this Permit does not relieve the Permittee from compliance with applicable State water quality standards established in ADEM Admin. Code ch. 335-6-10, and does not preclude the Department from taking action as appropriate to address the potential for contravention of applicable State water quality standards which could result from discharges of pollutants from the permitted facility.
- b. Compliance with Permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point source(s) identified on Page 1 of this Permit cause(s) or contribute(s) to a condition in contravention of State water quality standards, the Department may require abatement action to be taken by the Permittee, modify the Permit pursuant to the Department's rules and regulations, or both.
- c. If the Department determines, on the basis of a notice provided pursuant to Part II.C.2. of this Permit or any investigation, inspection, or sampling, that a modification of this Permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the noticed act until the Permit has been modified.

5. Compliance with Statutes and Rules

- a. This Permit has been issued under ADEM Admin. Code div. 335-6. All provisions of this division, that are applicable to this Permit, are hereby made a part of this Permit. A copy of this division may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36110-2059.
- b. This Permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

6. Right of Entry and Inspection

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

7. Duty to Reapply or Notify of Intent to Cease Discharge

- a. If the Permittee intends to continue to discharge beyond the expiration date of this Permit, the Permittee shall file with the Department a complete permit application for reissuance of this Permit at least 180 days prior to its expiration.
- b. If the Permittee does not desire to continue the discharge(s) allowed by this Permit, the Permittee shall notify the Department at least 180 days prior to expiration of this Permit of the Permittee's intention not to request reissuance of this Permit. This notification must include the information required in Part I.D.4.a and be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Admin. Code r. 335-6-6-.09.
- c. Failure of the Permittee to submit to the Department a complete application for reissuance of this Permit at least 180 days prior to the expiration date of this Permit will void the automatic continuation of this Permit as provided by ADEM Admin. Code r. 335-6-6-.06, and should this Permit not be reissued for any reason, any discharge after the expiration of this Permit will be an unpermitted discharge.

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under this Permit shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

3. Permit Enforcement

This NPDES Permit is a Permit for the purpose of the AWPCA, the AEMA, and the FWPCA, and as such all terms, conditions, or limitations of this Permit are enforceable under State and Federal law.

4. Relief From Liability

Except as provided in Part II.B.1. (Bypass) and Part II.B.2. (Upset), nothing in this Permit shall be construed to relieve the Permittee of civil or criminal liability under the AWPCA, AEMA, or FWPCA for noncompliance with any term or condition of this Permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Section 311 of the FWPCA, 33 U.S.C. §1321.

C. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, §22-22-9(c), all reports prepared in accordance with the terms of this Permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for in Section 309 of the FWPCA, 33 U.S.C. §1319, and Code of Alabama 1975, §22-22-14.

D. DEFINITIONS

1. Acid or ferruginous mine drainage - means mine drainage which, before any treatment, either has a pH of less than 6 or a total iron concentration equal to or greater than 10 mg/l.
2. Alabama Environmental Management Act (AEMA) - means Code of Alabama 1975, §§22-22A-1 et. seq., as amended.
3. Alabama Water Pollution Control Act (AWPCA) - means Code of Alabama 1975, §§22-22-1 et. seq., as amended.

4. Alkaline mine drainage - means mine drainage which, before any treatment, has a pH equal to or greater than 6.0 and total iron concentration of less than 10 mg/l.
5. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
6. Arithmetic Mean - means the summation of the individual values of any set of values divided by the number of individual values.
7. BOD - means the five-day measure of the pollutant parameter biochemical oxygen demand
8. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.
9. CBOD - means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.
10. Coal Mine - means an area, on or beneath land, used or disturbed in activities related to the extraction, removal, or recovery of coal from natural or artificial deposits, including active mining and reclamation.
11. Coal Preparation Plant - means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility.
12. Coal Preparation Plant Associated Areas - means the coal preparation plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities.
13. Coal Preparation Plant Water Circuit - means all pipes, channels, basins, tanks, and all other structures and equipment that convey, contain, treat, or process any water that is used in coal preparation processes within a coal preparation plant.
14. Coal Refuse Disposal Pile - means any coal refuse deposited on the earth and intended as permanent disposal or long-term storage (greater than 180 days) of such material, but does not include coal refuse deposited within the active mining area or coal refuse never removed from the active mining area.
15. Controlled Surface Mine Drainage - means any surface mine drainage that is pumped or siphoned from the active mining area.
16. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.
17. Daily maximum - means the highest value of any individual sample result obtained during a day.
18. Daily minimum - means the lowest value of any individual sample result obtained during a day.
19. Day - means any consecutive 24-hour period.
20. Department - means the Alabama Department of Environmental Management.

21. Director - means the Director of the Department or his authorized representative or designee.
22. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other waste into waters of the state." Code of Alabama 1975, §22-22-1(b)(8).
23. Discharge monitoring report (DMR) - means the form approved by the Director to accomplish monitoring report requirements of an NPDES permit.
24. DO - means dissolved oxygen.
25. E. coli – means the pollutant parameter *Escherichia coli*.
26. 8HC - means 8-hour composite sample, including any of the following:
 - a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
 - b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.
27. EPA - means the United States Environmental Protection Agency.
28. Federal Water Pollution Control Act (FWPCA) - means 33 U.S.C. §§1251 et. seq., as amended.
29. Flow – means the total volume of discharge in a 24-hour period.
30. Geometric Mean - means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).
31. Grab Sample - means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.
32. Indirect Discharger - means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.
33. Industrial User - means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D -- Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.
34. mg/L - means milligrams per liter of discharge.
35. MGD - means million gallons per day.
36. Monthly Average - means, other than for E. coli bacteria, the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for E. coli bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period. (Zero discharges shall not be included in the calculation of monthly averages.)

37. New Discharger - means a person owning or operating any building, structure, facility or installation:
- From which there is or may be a discharge of pollutants;
 - From which the discharge of pollutants did not commence prior to August 13, 1979, and which is not a new source; and
 - Which has never received a final effective NPDES permit for dischargers at that site.
38. New Source - means:
- A new source as defined for coal mines by 40 CFR Part 434.11 (1994); and
 - Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - After promulgation of standards of performance under Section 306 of FWPCA which are applicable to such source; or
 - After proposal of standards of performance in accordance with Section 306 of the FWPCA which are applicable to such source, but only if the standards are promulgated in accordance with Section 206 within 120 days of their proposal.
39. NH₃-N - means the pollutant parameter ammonia, measured as nitrogen.
40. 1-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.
41. Permit application - means forms and additional information that are required by ADEM Admin. Code r. 335-6-6-.08 and applicable permit fees.
42. Point Source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged." Section 502(14) of the FWPCA. 33 U.S.C. §1362(14).
43. Pollutant - includes for purposes of this Permit, but is not limited to, those pollutants specified in Code of Alabama 1975, §22-22-1(b)(3) and those effluent characteristics, excluding flow, specified in Part I.A. of this Permit.
44. Pollutant of Concern - means those pollutants for which a water body is listed as impaired or which contribute to the listed impairment.
45. Preparation, Dry - means a dry preparation facility within which the mineral/material is cleaned, separated, or otherwise processed without use of water or chemical additives before it is shipped to the customer or otherwise utilized. A dry preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Dry preparation also includes minor water spray(s) used solely for dust suppression on equipment and roads to minimize dust emissions.
46. Preparation, Wet - means a wet preparation facility within which the mineral/material is cleaned, separated, or otherwise processed using water or chemical additives before it is shipped to the

customer or otherwise utilized. A wet preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Wet preparation also includes mineral extraction/processing by dredging, slurry pumping, etc.

47. Privately Owned Treatment Works - means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".
48. Publicly Owned Treatment Works (POTW) - means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
49. Receiving Stream - means the "waters" receiving a "discharge" from a "point source".
50. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
51. 10-year, 24-hour precipitation event - means that amount of precipitation which occurs during the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.
52. TKN - means the pollutant parameter Total Kjeldahl Nitrogen.
53. TON - means the pollutant parameter Total Organic Nitrogen.
54. TRC - means Total Residual Chlorine.
55. TSS - means the pollutant parameter Total Suspended Solids
56. Total Year-to-Date discharge limitation - means the sum of the discharge mass flow rates of a pollutant on all previous days within a calendar year. For days when data has not been collected, the mass flow rates shall be assumed to be equal to the most recent calculated daily mass flow rate.
57. Treatment facility and treatment system - means all structures which contain, convey, and as necessary, chemically or physically treat mine and/or associated preparation plant drainage, which remove pollutants limited by this Permit from such drainage or wastewater. This includes all pipes, channels, ponds, tanks, and all other equipment serving such structures.
58. 24HC - means 24-hour composite sample, including any of the following:
 - a. The mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
 - b. A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

- c. A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
- 59. 24-hour precipitation event - means that amount of precipitation which occurs within any 24-hour period.
- 60. 2-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.
- 61. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate facilities, lack of preventive maintenance, or careless or improper operation.
- 62. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, §22-22-1(b)(2). "Waters" include all "navigable waters" as defined in §502(7) of the FWPCA, 33 U.S.C. §1362(7), which are within the State of Alabama.
- 63. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
- 64. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

E. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

F. PROHIBITIONS AND ACTIVITIES NOT AUTHORIZED

- 1. Discharges from disposal or landfill activities as described in ADEM Admin. Code div. 335-13 are not authorized by this Permit unless specifically approved by the Department.
- 2. Relocation, diversion, or other alteration of a water of the State is not authorized by this Permit unless specifically approved by the Department.
- 3. Lime or cement manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

4. Concrete or asphalt manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.
5. The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the Permittee or not identified in the application for this Permit or not identified specifically in the description of an outfall in this Permit is not authorized by this Permit.

PART IV SPECIAL REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

A. DISCHARGES TO IMPAIRED WATERS

1. This Permit does not authorize new sources or new discharges of pollutants of concern to impaired waters unless consistent with an EPA-approved or EPA-established Total Maximum Daily Load (TMDL) and applicable State law, or unless compliance with the limitations and requirements of the Permit ensure that the discharge will not contribute to further degradation of the receiving stream. Impaired waters are those that do not meet applicable water quality standards and are identified on the State of Alabama's §303(d) list or on an EPA-approved or EPA-established TMDL. Pollutants of concern are those pollutants for which the receiving water is listed as impaired or contribute to the listed impairment.
2. Facilities that discharge into a receiving stream which is listed on the State of Alabama's §303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the waters are impaired, must within six (6) months of the Final §303(d) list approval, document in its BMP plan how the BMPs will control the discharge of the pollutant(s) of concern, and must ensure that there will be no increase of the pollutants of concern. A monitoring plan to assess the effectiveness of the BMPs in achieving the allocations must also be included in the BMP plan.
3. If the facility discharges to impaired waters as described above, it must determine whether a TMDL has been developed and approved or established by EPA for the listed waters. If a TMDL is approved or established during this Permit cycle by EPA for any waters into which the facility discharges, the facility must review the applicable TMDL to see if it includes requirements for control of any water discharged by the Permittee. Within six (6) months of the date of TMDL approval or establishment, the facility must notify the Department on how it will modify its BMP plan to include best management practices specifically targeted to achieve the allocations prescribed by the TMDL, if necessary. Any revised BMP plans must be submitted to the Department for review. The facility must include in the BMP plan a monitoring component to assess the effectiveness of the BMPs in achieving the allocations.

B. PRECIPITATION EVENT DISCHARGE LIMITATIONS

1. Monitoring for Claims of Precipitation Event Discharge Limitation Exemption

Any sample of discharge collected in accordance with Parts I.C.1.a. and b. for which the Permittee submits a claim of exemption pursuant to Part IV.B.2., shall be collected within 48 hours after the commencement of the 24-hour precipitation event and prior to the cessation of the discharge or increased discharge. The sample shall be analyzed for each effluent characteristic as specified in Part I.A.2. Within 24 to 36 hours after the cessation of the 24-hour precipitation event, the Permittee shall collect an additional sample of the discharge and shall analyze such sample for each effluent characteristic specified in Part I.A.1. of this Permit.

2. Precipitation Event Discharge Limitation Exemption Submittal

Excluding discharges of drainage from the underground workings of an underground coal mine which are not commingled with other drainage eligible for precipitation event discharge limitations, any discharge or increase in the volume of a discharge which is caused by an applicable 24-hour precipitation event as described in Part IV.B.3. and which occurs during or within 24-hours after such event, may be exempt from the discharge limitations specified in Part I.A. provided that the discharge is addressed in Parts IV.B.4. through 8. and the Permittee submits a written claim of exemption to the Director with the DMR required to be submitted by Part I.D. of this Permit, which shall contain:

- a. Persuasive evidence that the discharge or increase in the volume of a discharge was caused by an applicable 24-hour precipitation event;
- b. Persuasive evidence of the amount of precipitation occurring during the applicable 24-hour precipitation event;
- c. Persuasive evidence demonstrating the origin of the drainage causing a discharge;
- d. The day and time at which the 24-hour precipitation event commenced and ceased;
- e. The volume or amount in inches of the applicable 24-hour precipitation event; and
- f. The results of monitoring conducted pursuant to Part I.A. of this Permit, if required thereby.

3. Applicable 24-Hour Precipitation Events

Applicable 24-hour precipitation events include those that are greater than 1-year, 24-hour precipitation events or less than, equal to, or greater than 2-year, 24-hour precipitation events, and 10-year, 24-hour precipitation events.

4. 24-Hour Precipitation Event Greater Than a 1-Year, 24-Hour Precipitation Event, but Less Than a 10-Year, 24-Hour Precipitation Events

Discharge limitations listed in Part I.A.2. may apply to discharges of acid or ferruginous drainage from coal refuse disposal piles, provided that the Permittee has met the submittal requirements of Part IV.B.2., for any discharge or increase in the volume of a discharge caused by a 24-hour precipitation event greater than a 1-year, 24-hour precipitation event, but less than or equal to a 10-year, 24-hour precipitation event.

5. 24-Hour Precipitation Event Less Than or Equal to a 2-Year, 24-Hour Precipitation Event

Discharge limitations listed in Part I.A.2. may apply to discharges of drainage from acid or ferruginous mining areas (excluding discharges from steep slope mining areas, discharges from mountaintop removal operations, discharges from controlled surface mine, and discharges from underground workings of underground mines), provided that the Permittee has met the submittal requirements of Part IV.B.2., for any discharge or increase in the volume of a discharge caused by a 24-hour precipitation event less than or equal to a 2-year, 24-hour precipitation event.

6. 24-Hour Precipitation Event Greater Than a 2-Year, 24-Hour Precipitation Event, but Less Than a 10-Year, 24-Hour Precipitation Events

Discharge limitations listed in Part I.A.2. may apply to discharges of drainage from acid or ferruginous mining areas (excluding discharges from steep slope mining areas, discharges from mountaintop removal operations, discharges from controlled surface mine, and discharges from underground workings of underground mines), provided that the Permittee has met the submittal requirements of Part IV.B.2., for any discharge or increase in the volume of a discharge caused by a 24-hour precipitation event greater than a 2-year, 24-hour precipitation event, but less than or equal to a 10-year, 24-hour precipitation event.

7. 24-Hour Precipitation Event Less Than or Equal to a 10-Year, 24-Hour Precipitation Event

Discharge limitations listed in Part I.A.2. may apply to discharges of drainage from steep slope mining areas, discharges of drainage from mountaintop removal areas, discharges of alkaline drainage (excluding discharges from underground workings of underground mines and that are not commingled with other discharges), and discharges from coal preparation plant associated areas

(excluding acid or ferruginous mine drainage from coal refuse disposal piles), provided that the Permittee has met the submittal requirements of Part IV.B.2., for any discharge or increase in the volume of a discharge caused by a 24-hour precipitation event less than or equal to a 10-year, 24-hour precipitation event.

8. 24-Hour Precipitation Event Greater Than a 10-Year, 24-Hour Precipitation Event

Discharge limitations listed in Part I.A.2. may apply to discharges of drainage from alkaline, acid, or ferruginous mining areas, discharges of steep slope mining areas, discharges of drainage from mountaintop removal operations, discharges of drainage from coal preparation plants and associated areas, discharges of drainage from coal refuse piles, the underground workings of an underground coal mine which are commingled with other discharges eligible for precipitation event discharge limitations, and discharges from reclamation areas, provided that the Permittee has met the submittal requirements of Part IV.B.2., for any discharge or increase in the volume of a discharge caused by a 24-hour precipitation event greater than a 10-year, 24-hour precipitation event.

C. POST-MINING DISCHARGE LIMITATIONS

1. Excluding discharges from the underground workings of an underground coal mine, any discharge shall be exempt from the discharge limitations specified in Part I.A.1., provided that:
 - a. All mining in the drainage basin(s) associated with the discharge has ceased;
 - b. Revegetation has been established on all areas mined in the drainage basin(s) associated with the discharge;
 - c. The Permittee has been granted, in writing, a Phase II Bond Release, if applicable, by the ASMC for all areas mined in the drainage basin(s) associated with the discharge;
 - d. The Permittee has certified to the Director, in writing, its compliance with Parts IV.C.1.a. through c.; and
 - e. The Permittee's request for post-mining discharge limitations has been approved by the Department in writing.
2. Any discharge, which pursuant to Part IV.C.1. is exempt from the discharge limitations specified in Part I.A.1., shall be limited and monitored by the Permittee as specified in Part I.A.3.

D. pH EXEMPTION DISCHARGE LIMITATIONS

Where the application of neutralization and sedimentation treatment technology results in the Permittee's inability to comply with applicable total manganese discharge limitations, the daily maximum discharge limitation for pH shall be 10.5 s.u. However, the discharge shall not cause the in-stream pH values to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u., nor greater than 8.5 s.u. Use of this exemption must be noted on the DMR Form when submitted for each eligible outfall. Documentation justifying the necessity for the exemption must be also be submitted at the time of the associated DMR submittal.

E. MANGANESE EXEMPTION DISCHARGE LIMITATIONS

Limitations and monitoring requirements for total manganese do not apply if the drainage, before any treatment, has a pH equal to or more than 6.0 s.u. and a total iron concentration of less than 10.0 mg/l. Use of this exemption must be noted on the Discharge Monitoring Report (DMR) form when submitted for each

eligible outfall. Documentation of alkaline mine drainage before treatment must also be submitted at the time of or prior to the associated DMR submittal.

F. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR ACUTE TOXICITY

Except as provided below, the Permittee shall perform 48-hour acute toxicity screening tests on the discharges required to be tested for acute toxicity in Part I.A. of this Permit.

The Permittee may certify, in writing, that the activities at the site at the time of sample collection will result in representative discharges, and therefore perform the toxicity tests on only the samples collected from the representative outfalls. The certification must be signed by a responsible official of the Permittee as defined in ADEM Admin Code r. 335-6-6-.09 and include the following statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1. Test Requirements

- a. The tests shall be performed using undiluted effluent.
- b. Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this Permit.

2. General Test Requirements

- a. A grab sample shall be obtained for use in above biomonitoring tests. The holding time for each sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-012 or most current edition or another control water selected by the Permittee and approved by the Department.
- b. Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the Permittee shall rerun the tests as soon as practical within the monitoring period.
- c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.
- d. Should results from five consecutive testing periods indicate that the effluent does not exhibit acute toxicity, the Permittee may request, in writing, that the Toxicity monitoring and reporting requirements be suspended. It remains the responsibility of the Permittee to comply with the Toxicity monitoring and reporting requirements until written authorization to suspend the monitoring and reporting is received by the Permittee from the Director.

3. Reporting Requirements

- a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
- b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 6. of this part, an effluent toxicity report containing the information in Section 6. shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

4. Additional Testing Requirements

- a. If acute toxicity is indicated (noncompliance with permit limit), the Permittee shall perform two additional valid acute toxicity tests in accordance with these procedures. The toxicity tests shall be performed on new samples collected during the first discharge event after becoming aware of the acute toxicity. The additional samples shall be collected a minimum of 12 hours apart, or sooner if the discharge is not expected to continue for 12 hours. In the event that the discharge ceases prior to collection of the second additional sample, the sample shall be collected during the beginning of the next discharge event. The results of these tests shall be submitted no later than 28 days following the month in which the tests were performed. Additional testing sample collection and analysis timeframes may be extended, as necessary, to obtain the samples during discharges.
- b. After evaluation of the results of the additional tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The Permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).

5. Test Methods

The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).

6. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate this requirement or may increase or decrease the frequency of submittals.

- a. Introduction
 - (1) Facility Name, location and county
 - (2) Permit number
 - (3) Toxicity testing requirements of permit
 - (4) Name of receiving water body
 - (5) Contract laboratory information (if tests are performed under contract)

- (i) Name of firm
 - (ii) Telephone number
 - (iii) Address
- (6) Objective of test
- b. Plant Operations
 - (1) Discharge operating schedule (if other than continuous)
 - (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection date (MGD, CFS, GPM)
- c. Source of Effluent Water and Dilution Water
 - (1) Effluent samples
 - (i) Sample point
 - (ii) Sample collection dates and times
 - (iii) Sample collection method
 - (iv) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
 - (v) Sample temperature when received at the laboratory
 - (vi) Lapsed time from sample collection to delivery
 - (vii) Lapsed time from sample collection to test initiation
 - (2) Dilution Water samples
 - (i) Source
 - (ii) Collection date(s) and time(s) (where applicable)
 - (iii) Pretreatment (if applicable)
 - (iv) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, specific conductivity, etc.)
- d. Test Conditions
 - (1) Toxicity test method utilized
 - (2) End point(s) of test
 - (3) Deviations from referenced method, if any, and reason(s)
 - (4) Date and time test started

- (5) Date and time test terminated
- (6) Type and volume of test chambers
- (7) Volume of solution per chamber
- (8) Number of organisms per test chamber
- (9) Number of replicate test chambers per treatment
- (10) Test temperature, pH and dissolved oxygen as recommended by the method (to include ranges)
- (11) Feeding frequency, and amount and type of food
- (12) Light intensity (mean)
- e. Test Organisms
 - (1) Scientific name
 - (2) Life stage and age
 - (3) Source
 - (4) Disease treatment (if applicable)
- f. Quality Assurance
 - (1) Reference toxicant utilized and source
 - (2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)
 - (3) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.
 - (4) Physical and chemical methods utilized
- g. Results
 - (1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate
 - (2) Provide table of endpoints: LC50, NOAEC, Pass/Fail (as required in the applicable NPDES permit)
 - (3) Indicate statistical methods used to calculate endpoints
 - (4) Provide all physical and chemical data required by method
 - (5) Results of test(s) (LC50, NOAEC, Pass/Fail, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD)

- h. Conclusions and Recommendations
 - (1) Relationship between test endpoints and permit limits
 - (2) Action to be taken

G. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS FOR CHRONIC TOXICITY

Except as provided below, the Permittee shall perform short-term chronic toxicity tests on the discharges required to be tested for chronic toxicity by Part I.A. of this permit.

The Permittee may certify, in writing, that the activities at the site at the time of sample collection will result in representative discharges, and therefore perform the toxicity tests on only the samples collected from the representative outfalls. The certification must be signed by a responsible official of the Permittee as defined in ADEM Admin Code r. 335-6-6-.09 and include the following statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1. Test Requirements (Screening Test)

- a. The tests shall be performed using undiluted effluent for all outfalls not listed in the dilution table below:

Dilution Table	
Outfalls	Percentage (%)
005-1	61
006-1	39
007-1	32
008-1	93
009-1	91
010-1	59

- b. Any test result that shows a statistically significant reduction in survival, growth or reproduction between the control and the test at the 95% confidence level indicate chronic toxicity and constitute noncompliance with this permit.

2. General Test Requirements

- a. A grab sample shall be obtained for use in the above biomonitoring tests and collected every other day so that the laboratory receives water samples on the first, third and fifth

day of the seven-day test period. The holding time for each sample shall not exceed 36 hours, unless sample collection was not possible due to discharge cessation. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-013 or the most current edition or another control water selected by the Permittee and approved by the Department.

- b. Should the discharge cease prior to the third grab sample on the fifth day of discharge, the chronic test shall be terminated early and the code "NODI=F" shall be reported on the DMR to indicate insufficient flow. A report of insufficient flow shall not indicate noncompliance with the chronic toxicity testing requirements.
- c. Effluent toxicity tests in which the control survival is less than 80%, *P. promelas* dry weight per surviving control organism is less than 0.25 mg, *Ceriodaphnia* number of young per surviving control organism is less than 15, *Ceriodaphnia* reproduction where less than 60% of surviving control females produce three broods or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the Permittee shall rerun the tests as soon as practical within the monitoring period.
- d. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.

3. Reporting Requirements

- a. The Permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
- b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 6. of this part, an effluent toxicity report containing the information in Section 6. shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

4. Additional Testing Requirements

- a. If chronic toxicity is indicated (noncompliance with permit limit), the Permittee shall perform two additional valid chronic toxicity tests in accordance with these procedures. The toxicity tests shall be performed on new samples collected during the first discharge event after becoming aware of the chronic toxicity. The additional samples shall be collected a minimum of 12 hours apart, or sooner if the discharge is not expected to continue for 12 hours. In the event that the discharge ceases prior to collection of the second additional sample, the sample shall be collected during the beginning of the next discharge event. The results of these tests shall be submitted no later than 28 days following the month in which the tests were performed. Additional testing sample collection and analysis timeframes may be extended, as necessary, to obtain the samples during discharges.
- b. After evaluation of the results of the additional tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The Permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).

5. Test Methods

The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms." The Larval Survival and Growth Test, Methods 1000.0, shall be used for the fathead minnow (*Pimephales promelas*) test and the Survival and Reproduction Test, Method 1002.0, shall be used for the cladoceran (*Ceriodaphnia dubia*) test.

6. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any times suspend or reinstate this requirement or may decrease or increase the frequency of submittals.

a. Introduction

- (1) Facility name, location and county
- (2) Permit number
- (3) Toxicity testing requirements of permit
- (4) Name of receiving water body
- (5) Contract laboratory information (if tests are performed under contract)
 - (i) Name of firm
 - (ii) Telephone number
 - (iii) Address
- (6) Objective of test

b. Plant Operations

- (1) Discharge Operating schedule (if other than continuous)
- (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)
- (3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

- (1) Effluent samples
 - (i) Sampling point
 - (ii) Sample collection dates and times
 - (iii) Sample collection method

- (iv) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
 - (v) Lapsed time from sample collection to delivery
 - (vi) Lapsed time from sample collection to test initiation
 - (vii) Sample temperature when received at the laboratory
- (2) Dilution Water
 - (i) Source
 - (ii) Collection/preparation date(s) and time(s)
 - (iii) Pretreatment (if applicable)
 - (iv) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)
- d. Test Conditions
 - (1) Toxicity test method utilized
 - (2) End point(s) of test
 - (3) Deviations from referenced method, if any, and reason(s)
 - (4) Date and time test started
 - (5) Date and time test terminated
 - (6) Type and volume of test chambers
 - (7) Volume of solution per chamber
 - (8) Number of organisms per test chamber
 - (9) Number of replicate test chambers per treatment
 - (10) Test temperature, pH and dissolved oxygen as recommended by the method (to include ranges)
 - (11) Specify if aeration was needed
 - (12) Feeding frequency, amount and type of food
 - (13) Specify if (and how) pH control measures were implemented
 - (14) Light intensity (mean)
- e. Test Organisms
 - (1) Scientific name

- (2) Life stage and age
- (3) Source
- (4) Disease(s) treatment (if applicable)
- f. Quality Assurance
 - (1) Reference toxicant utilized and source
 - (2) Date and time of most recent chronic reference toxicant test(s), raw data and current control chart(s). The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.
 - (3) Dilution water utilized in reference toxicant test
 - (4) Results of reference toxicant test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship and evaluate test sensitivity
 - (5) Physical and chemical methods utilized
- g. Results
 - (1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate
 - (2) Provide table of endpoints: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)
 - (3) Indicate statistical methods used to calculate endpoints
 - (4) Provide all physical and chemical data required by method
 - (5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sublethal endpoints determined by hypothesis testing.
- h. Conclusions and Recommendations
 - (1) Relationship between test endpoints and permit limits
 - (2) Actions to be taken

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANGEMENT (ADEM)
OUTFALL CERTIFICATION SUMMARY**

PERMITTEE NAME: Carbon Oak, Inc.
 FACILITY NAME: Thunder Oaks Mine
 NPDES PERMIT NO: AL0081817
 ASMC PERMIT NO(S):
 COUNTY: DeKalb County

Outfall Number	Is Outfall Certified?	Date of Certification	Outfall Latitude and Longitude	Date of ADEM Monitoring Release
001-1	YES NO			
002-1	YES NO			
003-1	YES NO			
004-1	YES NO			
005-1	YES NO			
006-1	YES NO			
007-1	YES NO			
008-1	YES NO			
009-1	YES NO			
010-1	YES NO			
011-1	YES NO			
012-1	YES NO			

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title (Print)

Responsible Official

Signature

Duly Authorized Representative

Date

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION**

NPDES INDIVIDUAL PERMIT RATIONALE

Company Name: Carbon Oak, Inc.

Facility Name: Thunder Oaks Mine

County: DeKalb

Permit Number: AL0081817

Prepared by: Michael Bergh

Date: October 3, 2014

Receiving Waters: Wolf Branch, Bengis Creek, and Unnamed Tributaries to Bengis Creek of the Tennessee River Basin

Permit Coverage: New Source Coal Mine, Dry Preparation, Transportation and Storage, and Associated Areas

SIC Codes: 1221

The Department has made a tentative determination that the available information is adequate to support issuance of this permit.

This proposed permit covers a dry preparation new source coal mine, dry preparation, transportation and storage, and associated areas.

This proposed permit authorizes treated discharges into stream segments, other State waters, or local watersheds that currently have a water quality classification of Fish & Wildlife (F&W) (ADEM Admin. Code r. 335-6-10-.09). If the requirements of the proposed permit are fully implemented, the facility will not discharge pollutants at levels that will cause or contribute to a violation of the F&W classification.

Full compliance with the proposed permit terms and conditions is expected to be protective of instream water quality and ensure consistency with applicable instream State water quality standards for the receiving streams.

The active mining discharge limitations (Total Suspended Solids, Total Iron as Fe, and Total Manganese as Mn) and precipitation event discharge limitations are based on 40 CFR Part 434.

The active and post-mining discharge limitations for pH of 6.0 – 8.5 s.u. are based on instream water quality standards for streams classified as Fish & Wildlife found in ADEM Admin. Code r. 335-6-10-.09. However, during applicable precipitation events which qualify for alternative technology based limits, it is the opinion of the Department that discharges with an allowable pH daily maximum of 9.0 s.u. will not adversely affect the instream pH based on the low discharge/stream flow ratio. The proposed limitations have been shown to be protective of water quality.

40 CFR 434.62 allows the pH level in the final discharge to exceed 8.5 s.u. when neutralization and sedimentation treatment technology results in the Permittee's inability to comply with the applicable total manganese limitations. The acidity and metals composition of each discharge is unique and sometimes a pH value of 10.5 s.u. is necessary for the removal of manganese. However, the discharge shall not cause the in-stream pH to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u., nor greater than 8.5 s.u.

Post-mining discharge limitations are included in addition to the active mining and precipitation event discharge limitations. The post-mining discharge limitations are based on 40 CFR Part 434, Subpart E. This permit is more restrictive than the BAT Guidelines in that the Permittee, in order to qualify for the post-mining discharge

limitations, must have received a Phase II Bond Release from the Alabama Surface Mining Commission for all areas mined in the drainage basin(s) associated with the discharge. The reason a Phase II Bond Release is required for post-mining limitations rather than a Phase I Bond Release is that topsoil replacement and the commencement of revegetation are frequently important factors in controlling the effluent quality from a coal mine. The Department has determined that tying the post-mining discharge limitations to the Phase II Bond Release will effectively protect water quality in Alabama as it relates to coal mining.

Precipitation event discharge limitations are an alternate set of technology based limits afforded a facility under certain conditions, and they do not apply automatically. These alternative technology based limitations applicable during precipitation events are consistent with 40 CFR Part 434.63.

The additional effluent and Toxicity monitoring is required so that future determinations can be made as to whether or not a reasonable potential to cause or contribute to an excursion of numeric or narrative water quality standards exists. Chronic WET testing at the instream waste concentration (IWC) is included in addition to acute WET testing because discharges are expected to occur more frequently than in response to precipitation events.

The applicant has, in accordance with 40 CFR Part 122.21 and their NPDES permit application, submitted data relative to metals, cyanide, and total phenols as part of the application. The Department has acknowledged that the other Part A, B, and C pollutants listed in EPA Form 2C and 2D are not believed to be present in the waste stream due to the processes involved in the mining activity. Therefore, testing for the other Part A, B, and C pollutants listed in EPA Form 2C and 2D is not required.

The Department completed a reasonable potential analysis (RPA) of the discharge(s) based on laboratory data provided in the Permittee's application. The RPA indicates whether or not pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standard. Based on the analytical data submitted by the Permittee, the RPA indicates that there was no reasonable potential for in-stream water quality standards to be exceeded.

The Permittee has the responsibility to establish and maintain appropriate erosion/sediment control and pollution abatement practices to effectively treat the discharge for all precipitation events to comply with applicable state water quality standards at all times.

Pursuant to ADEM Admin. Code r. 335-6-6-.12(r) this permit requires the Permittee to design and implement a Spill Prevention Control and Countermeasures (SPCC) plan for all stored chemicals, fuels and/or stored pollutants that have the potential to discharge to a water of the State. This plan must meet the minimum engineering requirements as defined in 40 CFR Part 112 and must provide for secondary containment adequate to control a potential spill.

In accordance with ADEM Admin. Code r. 335-6-3-.07 the design professional engineer, as evidenced by their seal and/or signature on the application, has accepted full responsibility for the effectiveness of the waste treatment facility to treat the Permittee's effluent to meet NPDES permit limitations and requirements, and to fully comply with Alabama's water quality standards, when such treatment facilities are properly operated.

The Pollution Abatement/Prevention (PAP) plan for this facility has been prepared by a professional engineer (PE) registered in the State of Alabama and is designed to ensure reduction of pollutants in the waste stream to a level that, if operated properly, the discharge will not contribute to or cause a violation of applicable State water quality standards. By Memorandum of Understanding with the Alabama Surface Mining Commission (ASMC) the PAP for coal operations is reviewed/approved by ASMC. The proposed permit terms and conditions are predicated on the basis of ensuring a reduction of pollutants in the discharge to a level that reduces the potential of contributing to or causing a violation of applicable State water quality standards.

If there is a reasonable potential that a pollutant present in the treated discharges from a facility could cause or contribute to a contravention of applicable State water quality standards above numeric or narrative criteria, 40 CFR § 122 requires the Department to establish effluent limits using calculated water quality criterion, establish effluent limits on a case-by-case basis using criteria established by EPA, or establish effluent limits based on an indicator parameter. Based on available information, potential pollutants discharged from this facility, if discharged within the concentrations allowed by this permit, would not have a reasonable potential to cause or contribute to a contravention of applicable State water quality standards.

The applicant is not proposing discharges of pollutant(s) to a water of the State with an approved Total Maximum Daily Load (TMDL). However, this proposed permit authorizes treated discharges into a stream or other State water that is a tributary of a State stream segment with an approved TMDL.

This proposed permit authorizes treated discharges into Wolf Branch, Bengis Creek, and Unnamed Tributaries of Bengis Creek which flow into Town Creek, a river with an approved TMDL for low dissolved oxygen and organic loading. Oxygen demand and organic loads are not pollutants expected in significant quantities from a discharge of this type. The TMDL states that the proposed outfalls discharge into the nonpoint source part of the TMDL (i.e., the NPS model). This model begins at Town Creek's source and goes to the Hudson Foods outfall, a distance of approximately 50.5 miles. Present calculations do not show point sources contributing to the TMDL.

The applicant is not proposing discharges into a stream segment or other State water that is included on Alabama's current CWA §303(d) list.

The applicant is not proposing any new discharges of pollutants to an ADEM identified Tier I water.

The proposed permit action authorizes new discharges of pollutants to receiving waters determined by the Department to be waters where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water (Tier II). Pursuant to ADEM Admin. Code r. 335-6-10 (Antidegradation Policy and Implementation of the Antidegradation Policy), the applicant has submitted and the Department has reviewed and considered information regarding (1) demonstration of necessity/importance, (2) alternatives analysis, and (3) calculations of total annualized costs for technically feasible treatment alternatives regarding the proposed new discharges to Tier II waters. The Department has determined, based on the applicant's demonstration, that the proposed new discharges to the Tier II waters are necessary for important economic or social development in the area in which the waters are located.

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION**

ANTIDEGRADATION RATIONALE

Company Name: Carbon Oak, Inc.
Facility Name: Thunder Oaks Mine
County: DeKalb
Permit Number: A1.0081817
Prepared by: Michael T. Bergh
Date: 6/18/14
Receiving Waters: Wolf Branch, Bengis Creek, and Unnamed Tributaries to Bengis Creek
Stream Category: Tier II as defined by ADEM Admin. Code 335-6-10-.12

Discharge Description: New Source Coal Mine, Dry Preparation, Transportation and Storage, and Associated Areas

The following preliminary determination was prepared in accordance with ADEM Admin. Code 335-6-10-.12(7)(c):

The Department has reviewed the information submitted by applicant in accordance with ADEM Admin. Code 335-6-10-.12(9). The applicant has demonstrated that there are no technically or economically viable treatment options in its alternatives analysis that would completely eliminate a direct discharge.

The permit applicant has indicated that the following economic and social benefits will result from this project:

1. The Permittee expects that the issuance of the above referenced NPDES permit will result in an estimated \$36,575 in Personal Property Tax, \$134,063 in State Income Tax, \$56,687 in State Withholding Tax, \$5,000 in Business Privilege Tax, \$92,125 in Severance Tax, \$90,250 in Fuel Tax, and \$45,000 in Sales Tax on Supplies.
2. The Permittee expects to employ 30 full time employees if the abovementioned permit is issued.
3. The Permittee states that the added jobs will reduce unemployment in the area, increase local tax revenue, and improve the quality of life for the residents and community.

The Department has determined that the discharge proposed by the permit applicant is necessary for important economic and social development in the area of the outfall location in the receiving water.

Reviewed By:
Date:

Catherine McNeill

8-4-14



Facility Name: Carbon Oak, Inc. - Thunder Oaks Mine																						
NPDES No.: AL0081817																						
Outfalls 011-1 and 012-1 ¹²³																						
Human Health Consumption Fish only (µg/l)																						
Freshwater F&W classification.				Freshwater Acute (µg/l) O _a = 1Q10								Freshwater Chronic (µg/l) O _a = 7Q10							Carcinogen O _a = Annual Average Non-Carcinogen O _a = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant ⁴ (C _{avg}) ⁵	Water Quality Criteria (C ₁)	Draft Permit Limit (C _{max})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant ⁴ (C _{avg}) ⁵	Water Quality Criteria (C ₁)	Draft Permit Limit (C _{avg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C ₁)	Draft Permit Limit (C _{avg}) ⁵	20% of Draft Permit Limit	RP?			
1	Antimony		YES	0	0	-	340,000	68,000	No	0	0	-	150,000	30,000	-	3.73E+02	7.47E+01	7.47E+01	No			
2	Arsenic			0	0	-	-	-	No	0	0	-	-	-	-	3.03E-01	8.71E-01	1.74E-01	No			
3	Beryllium			0	0	-	-	-	No	0	0	-	-	-	-	-	-	-	-			
4	Cadmium			0	0	2,014	2,014	0.403	No	0	0	0.246	0.246	0.049	No	-	-	-	-			
5	Chromium/ Chromium III			0	0	569,763	569,763	113,953	No	0	0	74,115	74,115	14,823	No	-	-	-	-			
6	Chromium/ Chromium VI			0	0	16,000	16,000	3,200	No	0	0	11,000	11,000	2,200	No	-	-	-	-			
7	Copper			0	0	13,439	13,439	2,688	No	0	0	8,956	8,956	1,791	No	1.30E+03	2.60E+02	2.60E+02	No			
8	Lead			0	0	64,581	64,581	12,916	No	0	0	2,517	2,517	0.503	No	-	-	-	-			
9	Mercury			0	0	2,400	2,400	0.480	No	0	0	0.012	0.012	0.002	No	4.24E+02	8.48E+03	8.48E+03	No			
10	Nickel			0	8.1	468,236	468,236	93,647	No	0	8.1	52,007	52,007	10,401	No	9.93E+02	1.99E+02	1.99E+02	No			
11	Selenium			0	0	20,000	20,000	4,000	No	0	0	5,000	5,000	1,000	No	2.43E+03	4.86E+02	4.86E+02	No			
12	Silver			0	0	3,217	3,217	0.643	No	0	0	-	-	-	-	-	-	-	-			
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	2.74E-01	5.47E-02	No			
14	Zinc			0	0	117,180	117,180	23,436	No	0	0	118,139	118,139	23,628	No	1.49E+04	2.98E+03	2.98E+03	No			
15	Cyanide			0	0	22,000	22,000	4,400	No	0	0	5,200	5,200	1,040	No	9.33E+03	9.33E+03	1.87E+03	No			
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-			
17	Hardness (as CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-			

¹Outfalls 011-1 and 012-1 discharge to a UT of Bengis Creek. The 7Q10 for the receiving stream is 0.0 cfs.
 This is the receiving stream flow value used in the calculations.
²Outfall 012-1 is reported to have the highest discharge flow rate of 0.259698 MGD. This is the discharge flow rate used in the calculations.
³A hardness of 100 mg/L was used in the calculations based on expected stream hardness in this portion of the state.
⁴Discharge data for all parameters are the results of samples obtained from Outflow from Pit, Upper Cliff Mining, ASMC Permit P-3301 April 03, 2014.

Facility Name: Carbon Oak, Inc. - Thunder Oaks Mine
 NPDES No.: AL0081817 Outfalls 001-1 - 003-1¹²³

Freshwater F&W classification.										Freshwater Acute (µg/l) Q _s = 1Q10										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg/l)			
																														Carcinogen Q _s = Annual Average			
																														Non-Carcinogen Q _s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant ⁴ (C _{max})	Water Quality Criteria (C _i)	Draft Permit Limit (C _{draft})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant ⁴ (C _{avg})	Water Quality Criteria (C _i)	Draft Permit Limit (C _{draft})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C _i)	Draft Permit Limit (C _{draft})	20% of Draft Permit Limit	RP?														
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	3.73E+02	7.47E+01	No														
2	Arsenic		YES	0	0	340.000	340.000	68.000	No	0	0	150.000	150.000	30.000	No	3.03E-01	2.11E+00	4.22E-01	No														
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-														
4	Cadmium			0	0	2.014	2.014	0.403	No	0	0	0.246	0.246	0.049	No	-	-	-	-														
5	Chromium/ Chromium III			0	0	569.763	569.763	113.953	No	0	0	74.115	74.115	14.823	No	-	-	-	-														
6	Chromium/ Chromium VI			0	0	16.000	16.000	3.200	No	0	0	11.000	11.000	2.200	No	-	-	-	-														
7	Copper			0	0	13.439	13.439	2.688	No	0	0	8.956	8.956	1.791	No	-	-	-	-														
8	Lead			0	0	64.581	64.581	12.916	No	0	0	2.517	2.517	0.503	No	1.30E+03	1.30E+03	2.60E+02	No														
9	Mercury			0	0	2.400	2.400	0.480	No	0	0	0.012	0.012	0.002	No	4.24E-02	4.24E-02	8.48E-03	No														
10	Nickel			0	8.1	468.236	468.236	93.647	No	0	8.1	52.007	52.007	10.401	No	9.93E+02	9.93E+02	1.99E+02	No														
11	Selenium			0	0	20.000	20.000	4.000	No	0	0	5.000	5.000	1.000	No	2.43E+03	2.43E+03	4.86E+02	No														
12	Silver			0	0	3.217	3.217	0.643	No	0	0	-	-	-	-	-	-	-	-														
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	2.74E-01	5.47E-02	No														
14	Zinc			0	0	117.180	117.180	23.436	No	0	0	118.139	118.139	23.628	No	1.49E+04	1.49E+04	2.98E+03	No														
15	Cyanide			0	0	22.000	22.000	4.400	No	0	0	5.200	5.200	1.040	No	9.33E+03	9.33E+03	1.87E+03	No														
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-														
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-														

¹Outfalls 001-1 - 003-1 discharges to Wolf Branch. The 7Q10 for the receiving stream is 0.0 cfs.
 This is the receiving stream flow value used in the calculations.
²Outfall 001-1 is reported to have the highest discharge flow rate of 0.10875 MGD. This is the discharge flow rate used in the calculations.
³A hardness of 100 mg/L was used in the calculations based on expected stream hardness in this portion of the state.
⁴Discharge data for all parameters are the results of samples obtained from Outflow from Pit, Upper Cliff Mining, ASMC Permit P-3301 April 03, 2014.

Facility Name: Carbon Oak, Inc. - Thunder Oaks Mine
 NPDES No.: AL0081817 Outfalls 004-1¹²³

Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									
Freshwater F&W classification.										Freshwater Chronic (µg/l) Q _s = 7Q10										Human Health Consumption Fish only (µg)									

¹ Outfalls 004-1 discharges to Wolf Branch. The 7Q10 for the receiving stream is 0.0 cfs.
 This is the receiving stream flow value used in the calculations.
² Outfall 004-1 is reported to have the highest discharge flow rate of 0.056810 MGD. This is the discharge flow rate used in the calculations.
³ A hardness of 100 mg/L was used in the calculations based on expected stream hardness in this portion of the state.
⁴ Discharge data for all parameters are the results of samples obtained from Outflow from Pit, Upper Cliff Mining, ASMC Permit P-3301 April 03, 2014.

Facility Name: Carbon Oak, Inc. - Thunder Oaks Mine
 NPDES No.: AL0081817 Outfalls 005-1 through 010-1¹²³

Freshwater FAW classification.										Human Health Consumption Fish only (µg/l)									
Freshwater Acute (µg/l) O ₃ = 1Q10										Freshwater Chronic (µg/l) O ₃ = 7Q10									
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant ⁴ (C _{crit}) ⁴	Water Quality Criteria (C ₁)	Draft Permit Limit (C _{perm})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant ⁴ (C _{avg}) ⁴	Water Quality Criteria (C ₂)	Draft Permit Limit (C _{avg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C ₃)	Draft Permit Limit (C _{avg}) ⁴	20% of Draft Permit Limit	RP?
1	Antimony			0	0	340,000	361,220	72,244	No	0	0	-	-	-	No	3.73E+02	4.04E+02	8.09E+01	No
2	Arsenic		YES	0	0	-	-	-	-	0	0	150,000	162,482	32,496	No	3.03E+01	2.14E+01	4.28E+00	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	No	-	-	-	-
4	Cadmium			0	0	2,014	2,139	0.428	No	0	0	0.246	0.266	0.053	No	-	-	-	-
5	Chromium/ Chromium III			0	0	569,763	605,323	121,065	No	0	0	74,115	80,282	16,056	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16,000	16,999	3,400	No	0	0	11,000	11,915	2,383	No	-	-	-	-
7	Copper			0	0	13,439	14,278	2,856	No	0	0	8,956	9,701	1,940	No	-	-	-	-
8	Lead			0	0	64,581	68,612	13,722	No	0	0	2,517	2,726	0.545	No	1.30E+03	1.41E+03	2.82E+02	No
9	Mercury			0	0	2,400	2,550	0.510	No	0	0	0.012	0.013	0.003	No	-	-	-	-
10	Nickel			0	8.1	468,236	467,459	99,492	No	0	8.1	52,007	56,334	11,267	No	4.24E+02	4.60E+02	9.19E+03	No
11	Selenium			0	0	20,000	21,248	4,250	No	0	0	5,000	5,416	1,083	No	9.93E+02	1.08E+03	2.15E+02	No
12	Silver			0	0	3,217	3,418	0.684	No	0	0	-	-	-	-	2.43E+03	2.63E+03	5.27E+02	No
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
14	Zinc			0	0	117,180	124,494	24,899	No	0	0	118,139	127,970	25,594	No	2.74E+01	2.96E+01	5.93E+02	No
15	Cyanide			0	0	22,000	23,373	4,675	No	0	0	5,200	5,633	1,127	No	1.49E+04	1.61E+04	3.23E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	9.33E+03	1.01E+04	2.02E+03	No
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-

¹Outfalls 005-1 through 010-1 discharge to Bengis Creek. The 7Q10 for the receiving stream is 0.0675 cfs.
 This is the receiving stream flow value used in the calculations.
²Outfall 008-1 is reported to have the highest discharge flow rate of 0.524266 MGD. This is the discharge flow rate used in the calculations.
³A hardness of 100 mg/L was used in the calculations based on expected stream hardness in this portion of the state.
⁴Discharge data for all parameters are the results of samples obtained from Outflow from Pit, Upper Cliff Mining, ASMC Permit P-3301 April 03, 2014.

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
FIELD OPERATIONS DIVISION NPDES INDIVIDUAL PERMIT APPLICATION**

**SURFACE & UNDERGROUND MINERAL & ORE OR MINERAL PRODUCT MINING QUARRYING, EXCAVATION,
BORROWING, HYDRAULIC MINING, STORAGE, PROCESSING, PREPARATION, RECOVERY, HANDLING,
LOADING, STORING, OR DISPOSING ACTIVITIES AND ASSOCIATED AREAS INCLUDING PRE-MINING SITE
DEVELOPMENT, CONSTRUCTION, EXCAVATION, CLEARING, DISTURBANCE, RECLAMATION, AND
ASSOCIATED AREAS**

S111663
P237687.1
F48583.1

R#12-25273 C. McNuili

\$4130.00

PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY BEFORE COMPLETING THIS FORM. COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS, OR MISSING SIGNATURES WILL DELAY PROCESSING. ATTACH ADDITIONAL COMMENTS OR INFORMATION AS NEEDED. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. COMMENCEMENT OF ACTIVITIES APPLIED FOR AS DETAILED IN THIS APPLICATION ARE NOT AUTHORIZED UNTIL PERMIT COVERAGE HAS BEEN ISSUED BY THE DEPARTMENT.

PLEASE TYPE OR PRINT IN INK ONLY.

I. APPLICANT INFORMATION

Initial Issuance: ☒ Major Modification: ☐ Reissuance: ☐ NPDES AL 0081817
Reissuance & Modification: ☐ Minor Modification: ☐ Transfer: ☐ Voluntary Termination: ☐

Company Name Carbon Oak, Inc.			Facility Name Thunder Oaks Mine		
Responsible Official and Title Raymond B. Jones, Jr., President			Facility Contact and Title Ron Edwards, Operations Manager		
Mailing Address of Applicant 401 Franklin Street			Facility Contact Street Address 1101 County Road 683		
City Huntsville	State Alabama	Zip 35801	City Sylvania	State Alabama	Zip 35988
Business Phone Number (256) 533-3311		Fax Number (256) 535-9756	Facility Contact Phone Number None		
Responsible Official Street/Physical Address & Phone Number Raymond B. Jones, Jr., President, 401 Franklin St., Huntsville, AL 35801, (256) 533-3311					Email Address rlj@gwjones.com
Registered Agent Name, Address, & Phone Number Raymond B. Jones, Jr., President, 401 Franklin St., Huntsville, AL 35801, (256) 533-3311					
Identify the name, title/position, and unless waived in writing by the Department, the residence of every officer, general partner, LLP partner, LLC member, investor, director, or person performing a function similar to a director, of the applicant, and each person who is the record or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the facility:					
Name		Title/Position		Residence Address (PO Box not acceptable)	
Raymond B. Jones, Jr.		President		5005-A Garth Road, Huntsville, Alabama 35802	
Mark H. Yokley		Vice-President, Secretary & Treasurer		5007 Garth Road, Huntsville, Alabama 35802	

II. OFFICER INFORMATION

Name of each corporation, partnership, association, and single proprietorship (other than applicant) having an Alabama NPDES permit at any time during the sixty (60) month period immediately preceding the date on which this form is signed for which any individual identified in Item I is or was an officer, general partner, LLP partner, LLC member, investor, director, or individual performing a function similar to a director, or principal (10% or more) stockholder:		
Name of corporation, partnership, association, or single proprietorship	Name of individual (from Item I)	Title/position in corporation, partnership, association, or single proprietorship
None		

III. LEGAL STRUCTURE APPLICANT

☒ Corporation ☐ Association ☐ Individual ☐ Single Proprietorship ☐ Partnership ☐ LLP ☐ LLC

☐ Government Agency _____ ☐ Other _____ ☐ Other _____

☒ Yes ☐ No If not an individual or Single Proprietorship, registrant is properly registered and in good standing with the Alabama Secretary of State's office. If "No", please explain: _____

Parent Corporation and Subsidiary Corporation of Applicant, if any N/A

Land Owner(s): SEE ATTACHED

Mining Sub-contractor(s)/Operator(s), If Known: N/A

IV. COMPLIANCE HISTORY

Has the applicant ever had (If the response to any item is, attach a letter of explanation.):

	Yes	No		Yes	No
(a) an Alabama NPDES-SID-UIC permit suspended or terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(b) an Alabama license to mine suspended or revoked?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) an Alabama or federal mining permit suspended or terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>			
(d) a reclamation bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited?				<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) a bond or similar security deposited in lieu of a bond, or portion thereof, the purpose of which was to secure compliance with any requirement of the Alabama Water Improvement Commission of Alabama Department of Environmental Management forfeited?				<input type="checkbox"/>	<input checked="" type="checkbox"/>

Identify every Warning Letter, Notice of Violation (NOV), Administrative Action, Directive, or litigation filed by ADEM or EPA during the three year (36 months) period preceding the date on which this form is signed issued to the applicant, parent corporation, subsidiary, general partner, LLP partner, or LLC Member. Indicate the date of issuance, briefly describe alleged violation, list actions (if any) to abate alleged violations, and indicate date of final resolution:

NONE

V. PROPOSED SCHEDULE

Anticipated Activity schedule: Commencement date 12/1/2012 Completion date or year: 2017

Proposed Area of the Permitted site: Total area in acre 596 Disturbed area in acres: 596

VI. OTHER PERMITS/AUTHORIZATIONS

1) List any other NPDES or other environmental permits, authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, Alabama Surface Mining Commission (ASMC), Alabama Department of Industrial Relations (ADIR), or other Agency, to the applicant, parent corporation, subsidiary, or LLC member for this facility whether presently effective, expired, suspended, or revoked (include permit numbers):

NONE

2) List any other NPDES or other ADEM permits, authorizations, or certifications that have been applied for or issued within the State by ADEM EPA, ASMC, or ADIR, to the applicant, parent corporation, subsidiary, or LLC member for other facilities whether presently effective, expired, suspended, or revoked (include permit numbers):

NONE

ATTACHEMENT III - LAND OWNERS

LAND OWNER(S)

SURFACE

(S-4)	Nelson & Minnie Louise Izell
(S-5)	Glenn & Wanda Wells
(S-6)	Madeline Wells
(S-7)	Evelyn Graben
(S-8)	Eloise Wells
(S-9)	Melissa & Richard Scott Rakestraw
(S-10)	Clyde L. Stephens c/o Bert W. Calvert
(S-13)	Roger Dell & Linda Pl Waldrop
(S-14)	Keith L. & Carrie I. Atchley
(S-15)	Kathan E. Willingham

MINERAL

(M-1)	Consolidated, LTD.
(M-2)	Susie T. Raymond Estate
(M-3)	R.C. Etherton

FEE

(F-1)	Nelson & Minnie Louise Izell
(F-2)	R.C. Etherton
(F-3)	Rodney & Pam Hitchcock
(F-4)	Glenda Hitchcock
(F-9)	Roger & Marzell Sims
(F-10)	Robert & Regina Sims
(F-11)	Clyde M. Shankles
(F-15)	Brett Haney
(F-16)	Krystin Haney
(F-17)	Tena & Derrick Haney
(F-18)	Denise Wilson
(F-19)	Kenneth & Jimmie Pell

VII. ACTIVITY DESCRIPTION & INFORMATION

Township(s), Range(s), Section(s) T6S, R8E, S-2, 3, 4, 10 & 11 County(s) DeKalb

Direction To Site: From the intersection of SR 75 & SR 35 in Rainsville, AL, proceed North on SR 75 for 3.89 miles, turn right on Co. Rd. 108 for 1.32 miles then turn left on Co. Rd. 681 at Oak Grove Church. Mine is 0.9 miles, north & south of Co. Rd. 681.

- | Yes | No | Is/will this facility: | Yes | No | |
|-----|-------------------------------------|---|-----|--------------------------|--|
| (a) | <input type="checkbox"/> | <input checked="" type="checkbox"/> an existing facility which currently results in discharges to State waters? | (b) | <input type="checkbox"/> | <input checked="" type="checkbox"/> be located within any 100-year flood plan? |
| (c) | <input checked="" type="checkbox"/> | <input type="checkbox"/> a proposed facility which will result in a discharge to State waters? | (d) | <input type="checkbox"/> | <input checked="" type="checkbox"/> discharge to municipal Separate Storm Sewer? |
| (e) | <input type="checkbox"/> | <input checked="" type="checkbox"/> discharge to waters of or be located in the Coastal Zone? | (f) | <input type="checkbox"/> | <input checked="" type="checkbox"/> need/have ADEM UIC permit coverage? |
| (g) | <input type="checkbox"/> | <input checked="" type="checkbox"/> be located on Indian/historically significant lands? | (h) | <input type="checkbox"/> | <input checked="" type="checkbox"/> need/have ADEM SID permit coverage? |
| (i) | <input checked="" type="checkbox"/> | <input type="checkbox"/> need/have ASMC permit coverage? | (j) | <input type="checkbox"/> | <input checked="" type="checkbox"/> need/have ADIR permit coverage? |
| (k) | <input type="checkbox"/> | <input checked="" type="checkbox"/> generate, treat, store, or dispose of hazardous or toxic waste? If "yes, attach a detailed explanation. | | | |
| (l) | <input type="checkbox"/> | <input checked="" type="checkbox"/> be located in or discharge to a Public Supply (PWS) Watershed(s) or be located within 1/2 mile of any PWS well? | | | |

VIII. PROPOSED ACTIVITY TO BE CONDUCTED - Check All that apply

Type(s) of activity presently conducted at applicant's existing facility or proposed to be conducted at proposed facility (Check each one that applies):

- | | | | | | |
|---|---|---|--|--|---|
| <input checked="" type="checkbox"/> Surface mining | <input type="checkbox"/> Underground mining | <input type="checkbox"/> Auger mining | <input type="checkbox"/> Quarrying | <input type="checkbox"/> Hydraulic mining | <input checked="" type="checkbox"/> Mineral Storing |
| <input type="checkbox"/> Within-bank mining | <input type="checkbox"/> Lime production | <input type="checkbox"/> Cement production | <input type="checkbox"/> Synthetic fuel production | <input type="checkbox"/> Alternative fuels operation | |
| <input type="checkbox"/> Other beneficial/manufacturing operations | <input type="checkbox"/> Chemicals used in process or wastewater treatment (coagulant, biocide, etc.) | | | | |
| <input checked="" type="checkbox"/> Mineral loading | <input type="checkbox"/> Mineral wet preparation | <input checked="" type="checkbox"/> Mineral dry processing (crushing & screening) | | | |
| <input type="checkbox"/> Chemical processing or leaching | <input type="checkbox"/> Solution mining | <input type="checkbox"/> Construction related temporary borrow pits/areas | | | |
| <input checked="" type="checkbox"/> Mineral transportation | <input type="checkbox"/> rail | <input type="checkbox"/> barge | <input checked="" type="checkbox"/> truck | <input type="checkbox"/> Hydraulic mining, dredging, in stream or between stream-bank mining | |
| <input type="checkbox"/> Preparation plant waste recovery | <input checked="" type="checkbox"/> Onsite construction/mining waste/debris/equipment storing/disposing | | | | |
| <input checked="" type="checkbox"/> Excavation | <input checked="" type="checkbox"/> Grading, clearing, grubbing, etc. | <input checked="" type="checkbox"/> Reclamation of disturbed areas | | | |
| <input checked="" type="checkbox"/> Pre-mining logging or land clearing | <input checked="" type="checkbox"/> Pre-construction ponded water removal | <input type="checkbox"/> Waterbody relocation or other alteration | | | |
| <input type="checkbox"/> Adjacent/associated asphalt/concrete plant(s) | <input type="checkbox"/> Low volume sewage treatment package plant | <input type="checkbox"/> Creek/stream crossing | | | |
| <input checked="" type="checkbox"/> Other (Describe): | <u>County Road Relocation</u> | | <input type="checkbox"/> Other (Describe): | | |

Primary SIC Code 1221 Description Bituminous Coal Mining

Secondary SIC Code _____ Description _____

Narrative Description: Surface Coal Mining, Coal Loading & Transportation, Mine Reclamation Operations.
of the Activity _____

IX. MATERIAL TO BE REMOVED, PROCESSED, OR TRANSLOADED - List relative percentages for All that apply

List relative percentages of mineral(s) or mineral products presently mined, quarried, recovered, prepared, processed, handled, transloaded, or disposed at applicant's existing facility or to be mined, quarried, recovered, prepared, processed, handled, transloaded, or disposed at applicant's proposed facility. **If more than one mineral is to be mined, list the relative proportions of each mineral by tonnage for the life of the mine.**

_____ Dirt-Chert	_____ Sand-Gravel	_____ Chalk	_____ Tale	_____ Crushed rock-other
_____ Bentonite	_____ Industrial Sand	_____ Coal product, coke	_____ Marble	_____ Shale & Common Clay
<u>100%</u> Coal	_____ Lignite	_____ Fire clay	_____ Iron ore	_____ Coal fines/reuse recovery
_____ Slag, Red Rock	_____ Phosphate rock	_____ Granite	_____ Limestone, crushed limestone and dolomite	
_____ Bauxitric clay	_____ Kaolin	_____ Dimension stone	_____ Gold, other trace minerals (be specific) _____	
_____ Bauxitric ore (for Aluminum production)	_____ Other (be specific) _____	_____ Other (be specific) _____		

X. FUEL-CHEMICAL HANDLING, STORAGE & SPILL PREVENTION CONTROL & COUNTERMEASURES (SPCC) PLAN

Will fuels, chemicals, compounds or liquid waste be used or stored onsite?



Yes



No

If "yes", identify and indicate amount below:

Capacity

10,000

gallons

Contents

Diesel Fuel

Capacity

300

gallons

Contents

Hydraulic Oil

Capacity

100

gallons

Contents

Motor Oil

_____ gallons

_____ gallons

_____ gallons

_____ gallons

If "yes", a detailed SPCC Plan with acceptable format/content, including diagrams, must be attached to application according to ADEM Admin.

Code R. 335-6-6-.12(r). Unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis, attach

XI. POLLUTION ABATEMENT & PREVENTION (PAP) PLAN

☒ Yes ☐ No

ADEM 335-6-9 PAP and Appendix A & B Checklists have been completed and are attached as part of this application.

☒ Yes ☐ No

A detailed PAP Plan with format/content acceptable to ADEM is attached to application according to ADEM Admin. Code R. 335-6-9-.03 and Appendices A & B. or has been submitted to ASMC according to submittal procedures for ASMC regulated facilities (see next response).

NO

Date

If a coal facility, detailed mining and engineering design plan(s) are on file with or have been submitted to ASMC.

If response is "No", or if a coal facility and application has not been filed with ASMC, please explain:

ASMC Application to be Submitted September 01, 2012

XII. TOPOGRAPHICAL MAP SUBMITTAL

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary) of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, facility name, county, and township, range, & section(s) where the facility is located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show:

- | | |
|---|---|
| (a) an outline of legal boundary of entire property (property lines and lease boundaries) | (c) all existing and proposed disturbed areas |
| (b) an outline of the facility | (e) proposed and existing discharge points |
| (d) location of the facility | (g) lakes, springs, water wells, wetlands |
| (f) perennial, intermittent, and ephemeral streams | (i) all surrounding unimproved/improved roads |
| (h) all known facility dirt/improved access/haul roads | (k) buildings and structures, including fuel /water tanks |
| (j) high-tension power lines and railroad tracks | (m) drainage patterns, swales, washes |
| (l) contour lines, township-range section lines | (o) Any other pertinent or significant feature |
| (n) all drainage conveyance/treatment structures (ditches, berms, etc) | |

[symbols identified in Theodore D. Steger, Topographic Maps, U.S. Interior Dept., Geological Survey, 1978 (No. 0--274--961), as updated/revised]

XIII. DETAILED FACILITY MAP SUBMITTAL

Attach to this application a 1:500 scale or better, detailed auto-CAD map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary) of the facility. The facility or equivalent map(s) must include a caption indicating the name of the facility, name of the applicant, facility name, county, and township, range, & section(s) where the facility is located. Unless approved in advance by the Department, the facility or equivalent map(s), at a minimum, must show:

- | | |
|--|--|
| (a) Information listed in Item XII (a) - (o) above | (b) If noncoal, detailed, planned mining progression |
| (c) location of mining or pond cleanout waste storage/disposal areas | (d) If noncoal, location of topsoil storage areas |
| (e) Other information relevant to facility or operation | |
| (f) location of facility sign showing permitte name, facility name, and NPDES Number | |

XIV. PROPOSED NEW OR INCREASED DISCHARGES

Pursuant to ADEM Admin. Code Chapter 335-6-10-.12(9), responses to the following questions must be provided by the applicant requesting NPDES permit coverage for new or expanded discharges of pollutant(s) to Tier 2 waters (except discharges eligible for coverage under general permits). As a part of the permit application review process, the Department is required to determine, based on social development in the area in which the waters are located.

- ☒ YES New/increased discharges of pollutant(s) or discharge locations to Tier 2 waters are proposed. Complete items 1 - 6 below.
- ☐ NO New/increased discharges of pollutant(s) or discharge locations to Tier 2 waters are not proposed.

If "Yes", applicant is requesting issuance, modification, or reissuance & modification of permit coverage for new or expanded discharges of pollutant(s) not previously permitted. Complete this Item, Item XV, and Item XVI as necessary. **Attach additional sheets/documentation and supporting information as needed.**

- 1) What environmental or public health problem will the discharge be correcting? _____
Construction of proposed outfall facilities will not correct any existing environmental or public health problems.

- 2) How much will the discharger be increasing employment (at its existing facility or as a result of locating a new facility)? _____
At full production discharger will employ 30 workers and will utilize numerous contractors to perform support services.

- 3) How much reduction in employment will the discharger be avoiding? _____
No reduction in employment. It will be creating new jobs where none existed prior to this Surface Coal Mining Permit.

- 4) How much additional state or local taxes will the discharger be paying? **The discharger projects yearly coal production of 275,000 tons and estimates the following taxes; Personal Property Tax \$36,575, State Income Tax \$134,063 State Withholding Tax \$56,697, Business Privilege Tax \$5,000, Severance Tax \$92,125, Fuel Tax 90,250 and Sales Tax on Supplies \$45,000.**

- 5) What public service to the community will the discharger be providing? _____
Discharger will hire new employees from community and will construct water treatment facilities that will improve environmental and water quality at the proposed site.

- 6) What economic or social benefit will the discharger be providing to the community? _____
Provide jobs for residents of the community to reduce unemployment in the area. The additional employment will increase the local tax revenue which will help improve the quality of life of the residents and the whole community. Final land reclamation will improve the vegetation and water quality in the area.

Pursuant to ADEM Admin. Code Chapter 335-6-10, an evaluation of the discharge alternatives identified below has been completed and the following conclusions, as indicated, were reached. All proposed new or expanded discharges of pollutant(s) covered by the individual NPDES permitting program are subject to the provisions of the antidegradation policy. As part of the permit application review process, the Department is required to determine, based on the applicant's demonstration, that the proposed new or increased discharge to Tier 2 waters is necessary for important economic or social development in the area in which the waters are located. As a part of this demonstration, a registered professional engineer (PE) licensed to practice in the State of Alabama must complete an evaluation of the discharge alternatives, to include calculation of total annualized project costs (Item XVI) for each technically feasible alternative. Technically feasible alternatives with total annualized pollution control project costs that are less than 110% of the preferred alternative total annualized pollution control project costs for the Tier 2 new or increased discharge proposal are considered viable alternatives. **Support documentation is attached, referenced, or otherwise handled as appropriate.**

Alternative	Viable	Non-Viable	Reason/Rationale For Indicating Non-Viable
1) Treatment/Discharge Proposed In This Application	X		
2) Land Application		X	Water quantity too great
3) Pretreatment/Discharge to POTW By SID Permit		X	Water quantity too great
4) Relocation of Discharge		X	Topography does not support
5) Reuse/Recycle - Pollution Prevention		X	No use for recycled water
6) Other Process/Treatment Alternative		X	Surface water discharge-best alternative
7) Underground Injection By UIC Permit		X	Topography/Geology does not support
8) Other Projects Specific Alternative (s) Identified By the Applicant Or The ADEM		N/A	
9) Other Projects Specific Alternative (s) Identified By the Applicant Or The ADEM		N/A	

COMMENTS:

XVI. CALCULATION OF TOTAL ANNUALIZED PROJECT COSTS FOR PRIVATE SECTOR PROJECTS - ADEM Form 313 3/02
(ADEM form 312 3/02 - Public Sector Project is available upon request)

This item must be completed for each technically feasible alternative evaluated in Item XV. **Copy, complete, and attach additional blocks/sheets and supporting information as needed.**

Capital Costs of pollution control project to be expended or financed by applicant (Supplied by applicant)	<u>\$ 390,000.00</u> (1)
Interest Rate for Financing (Expressed as a decimal)	<u>Not financed</u> (i)
Time Period of Financing (Assume 10 years *)	<u>10 years</u> (n)
Annualization Factor ** $\frac{i}{(1+i)^n - 1} + i$	<u>N/A</u> (2)
Annualized Capital Cost [Calculate: (1) x (2)]	<u>\$ 39,000.00</u> (3)
Annual Cost of Operation & Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration & replacement) ***	<u>\$ 21,600.00</u> (4)
Total Annual Cost of Pollution Control Project [(3) + (4)]	<u>\$ 60,600.00</u> (5)

* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10 - year period for consistency in comparing projects.

** Or refer to Appendix B (application information) for calculated annualization factors.

*** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).

XVII. RECEIVING WATERS

List the requested permit Action for each outfall (issue, reissue, add, move, etc.). Outfall Designation including noting "E" for existing and "P" for proposed, name of receiving water(s), ADEM water use classification (WUC) for the receiving water, latitude and longitude (to seconds) of location(s) that run-off enters the receiving water, distance of receiving water from outfall in feet, number of disturbed acres, the number of drainage acres which will drain through each treatment system, outfall, or BMP, and if the outfall discharge to an ADEM listed CWA Section 303(d) waterbody segment at the time of application submittal.

Action	Outfall E/P	Receiving Water	ADEM WUC	Latitude	Longitude	Distance to Rec. Water	Disturbed Acres	Drainage Acres	303(d) Segment (Y/N)
(SEE ATTACHED)									

XVIII. DISCHARGE CHARACTERIZATION

- ☐ Yes, pursuant to 40 CFR 122.21, the applicant requests a waiver for completion of EPA forms 2C and/or 2D and certifies that the operating facility will discharge treated stormwater only, unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis that chemical/compound additives are not used, and that there are no process, manufacturing, or other industrial operations or wastewaters, including but not limited to lime or cement production, synfuel operations, etc.
- ☒ No, the applicant does not request a waiver and a complete and correct EPA form 2C and/or 2D is attached.

If a completed EPA form 2C and/or 2D is not attached, the applicant is required to supply the following information separately for every P or E outfall, if, necessary, attach extra sheets. List expected average daily discharge flow rate in gallons/day and in cfs, frequency of discharge in hours per day and days per month, average summer and winter temperature of discharge(s) in degrees centigrade (c), average daily discharge in pounds per day of Total Iron, Total Manganese, BOD₅, Total Aluminum (if bauxite or bauxite clay), and Total Suspended Solids:

Outfall E/P	Information Source - # of Samples	Flow cfs	Flow gpd	Frequency hours/day	Frequency days/month	pH s.u.	BOD ₅ lbs/day	Sum/Win Temp. C.	TSS lbs/day	Tot Fe lbs/day	Tot Mn lbs/day	Tot Al lbs/day
(SEE ATTACHED)												

Please supply the following information separately for every P or E outfall. If necessary, attach extra sheets. Identify and list expected average daily discharge in pounds per day of any other pollutant(s) listed in EPA Form 2C, Item V - Intake And Effluent Characteristics, Parts A, B, & C that are not referenced in XVIII above, that you know or there is reason to believe could be present in the discharge(s) at levels of concern. I/we (PE and applicant) certify that I/we have reviewed the list of pollutants referenced in EPA Forms 2C & 2D, and the pollutants listed in EPA Form 2C and/or 2D that are not listed below are believed absent or not present at levels of concern in any proposed or existing discharge(s) from this facility:

Outfall E/P	Reason Believed Present	Information Source - # of Samples	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
N/A											

XVII. RECEIVING WATERS

[illegible]

AIDEM Form 315 8-02

IP Application.doc

XIX. DISCHARGE STRUCTURE DESCRIPTION AND POLLUTANT SOURCE

If a completed EPA form 2C and/or 2D is not attached, the applicant is required to detail existing and proposed point source(s) covered by this permit application. Specify outfall number(s) as it appears on the map(s) required by this application [if this application is for a modification to an existing permit do not change the numbering sequence of the permitted outfalls]. describe each, e.g. pipe, spillway, channel, tunnel, conduit, well, discrete fissure, or container, and identify the origin of pollutants. The response must be precise for each outfall. If the discharge of pollutants from any outfall is the result of commingling of waste streams from different origins, each must be completely described. Please check all responses which describe the discharge origin.

Outfall	Discharge Structure Description	Description of Origin Of Pollutants	Surface Discharge	Groundwater Discharge	Wet Prep - Other Prod Plant	Pumped or Controlled Discharge	Low Volume STP	Other
(SEE ATTACHED)								

Origin of Pollutants - typical examples: (1) Discharge of drainage from the underground workings of an underground coal mine. (2) Discharge of drainage from a coal surface mine. (3) Discharge of drainage from a coal preparation plant and associated areas. (4) Discharge of process wastewater from a gravel-washing plant. (5) Discharge of wastewater from an existing source coal preparation plant. (6) Discharge of drainage from a sand and gravel pit. (7) Pumped discharge from a limestone quarry. (8) Controlled surface mine drainage (pumped or siphoned). (9) Discharge of drainage from mine reclamation. (10) Other: _____

XX. INFORMATION

Contact the Department prior to submittal with any questions or to request acceptable alternative content/format.

Be advised that you are not authorized to commence regulated activity until application can be processed, publically noticed, and approved to proceed is received in writing from the Department.

EPA Form(s) 1 and 2F need not be submitted unless specifically required by the Department. EPA Form(s) C and/or 2D are required to be submitted unless the applicant is eligible for and the Department grants a waiver (Item XVIII-Discharge Information). Proposed activities described in this application for this facility qualify for coverage under ADEM Admin. Code Chapter 335-6-9 including Appendices A & B, and there are no other potential pollutants, process, process wastewaters or activities that require permit coverage.

Coverage under the Department's NPDES Construction Stormwater Permit Program allows for short-lived, construction related, limited removal or relocation of offsite fill material, and does not provide coverage for mining activities described in ADEM Admin. Code Chapter 335-6-9 that exceeds or will exceed 5 un-reclaimed acres. Planned/proposed mining sites that are greater than 5 acres, that mine/process coal or metallic mineral/ore, or that have wet or chemical processing must apply for and obtain coverage under and Individual NPDES Permit prior to commencement or any land disturbance.

I understand by submission of this application, that I am advised to contact 1) the Alabama Surface Mining Commission (ASMC) if coal, coal fines, coal refuse, or other coal related materials are mined, transloaded, processed, etc., 2) the Alabama Department of Industrial Relations (ADIR) if conducting non-coal mining operations, 3) the Alabama Historical Commission for requirements related to any potential historic or culturally significant sites, 4) the Alabama Department of Conservation and Natural Resources (ADCNR) for requirements related to potential presence of threatened/endangered species, and 5) the US Army Corps of Engineers, Mobile or Nashville Districts, if this project could cause fill to be placed in federal waters or could interfere with navigation.

An information package, example PAP and SPCC plans, and other information are available upon request.

Complete this form, attach additional information as necessary, enclose appropriate processing fee (including Greenfield fee if applicable) and send to:

Field Operations Division - MNPS
Alabama Department of Environmental Management
Phone: (334) 394-4311
Fax: (334) 394-4326

PO Box 301463
Montgomery, AL 36130-1463

1400 Coliseum Boulevard
Montgomery, AL 36110-2059

Email: mnps@adem.state.al.us

Microsoft WORD 97

Internet Web Page: www.adem.state.al.us

XIX. DISCHARGE STRUCTURE DESCRIPTION AND POLLUTANT SOURCE

[illegible]

* **NOTE - Pumped Discharges during mining operations will be routed to ASMC approved Sediment Basins for treatment prior to discharge to State Waters.**

Y	N	N/A	Outfall(s): 001P through 012P
X			Runoff from all areas of disturbance is controlled
X			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
	X1		Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
X			Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
X			Width of top of dam greater than 12'
X			Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
X			Embankments and cutoff trench 95% compaction standard proctor ASTM
X			Embankment free of roots, tree debris, stones >6" diameter, etc.
X			Embankment constructed in lifts no greater than 12"
X			Spillpipe sized to carry peak flow from a one year storm event
X			Spillpipe will not chemically react with effluent
X			Subsurface withdrawal
	X2		Anti-seep collars extend radially at least 2' from each joint in spillpipe
X			Splashpad at the end of the spillpipe
X			Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
	X3		Emergency Spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
X			Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
X			Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
X			Maximum grade of haul road <15% for no more than 300'
X			Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
	X4		Detail drawings supplied for all stream crossings
	X5		Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
	X6		Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

X

The applicant has completed the surface water discharge alternatives analysis and has supporting documentation, including annualized costs for each technically feasible alternative available for review upon request

IDENTIFY AND PROVIDE DETAILED EXPLANATION FOR ANY "N" OR "N/A" RESPONSE(S):

X1 - Basins designed to ASMC Criteria
X2 - Basins designed to ASMC Criteria
X3 - No Discharge into PWS Classified Stream
X4 - No Stream Crossing Proposed
X5 - Submitted in ASMC Reclamation Plans
X6 - Submitted in ASMC Reclamation Plans

XXII. POLLUTION ABATEMENT PLAN (PAP) REVIEW CHECKLIST

Y	N	N/A
X		
X		
X		

PE Seal with License #
Name and Address of Operator
Legal Description of Facility

General Information:

X		
X		
X		
X		
X		

Name of Company
Number of Employees
Products to be Mined
Hours of Operation
Water Supply and Disposition

Topographic Map:

X		
	X1	
X		
X		
X		

Mine Location
Location of Prep Plant
Location of Treatment Basins
Location of Discharge Points
Location of Adjacent Streams

1"-500' or Equivalent Facility Map:

X		
X		
X		
X		

Drainage Patterns
Mining Details
All Roads, Structures Detailed
All Treatment Structures Detailed

Detailed Design Diagrams:

X		
X		
X		

Plan Views
Cross-section Views
Method of Diverting Runoff to Treatment Basins

Narrative of Operations:

X		
X		
X		

Raw Materials Defined
Processes Defined
Products Defined

Schematic Diagram:

X		
X		
X		

Points of Waste Origin
Collection System
Disposal System

Post Treatment Quantity and Quality of Effluent:

X		
X		
X		
X		

Flow
Suspended Solids
Iron Concentration
pH

Description of Waste Treatment Facility:

X		
X		
X		
X		

Pre-Treatment Measures
Recovery System
Expected Life of Treatment Basin
Schedule of Cleaning and/or abandonment

Other:

X		
X		
X		
X		
X		
	X2	

Precipitation/Volume Calculations/Diagram Attached
BMP Plan for Haul Roads
Measures for Minimizing Impacts to Adjacent Stream i.e., Buffer Strips, Berms, etc.
Method for Minimizing Nonpoint Source Discharges
Facility Closure Plans
PE Rationale(s) For Alternative Standards, Designs or Plans

IDENTIFY AND PROVIDE DETAILED EXPLANATION FOR ANY "N" OR "N/A" RESPONSE(S):

X1 - No Preparation Plant at Site.

X2 - No alternate standards, designs or plans are proposed.

XXIII. PROFESSIONAL ENGINEER (PE) CERTIFICATION

A detailed, comprehensive Pollution Abatement/Prevention Plan (PAP) must be prepared, signed, and certified by a professional engineer (PE), registered in the State of Alabama as follows:

"I certify on behalf of the applicant, that I have completed an evaluation of discharge alternatives (Item XV) for any proposed new or increased discharges of pollutant(s) to Tier 2 waters and reached the conclusions as indicated. I certify under penalty of law that technical information and data contained in this application, and a comprehensive PAP Plan including any attached SPCC plan, maps, engineering designs, etc. acceptable to ADEM, for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B. If the PAP Plan is properly implemented and maintained by the permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other permit requirements. The applicant has been advised that appropriate pollution abatement/prevention facilities and structural & non structural management practices or Department approved equivalent management practices as detailed in the PAP plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality."

Address P.O. Box 660548, Birmingham, Alabama 35266-0548PE Registration #12739Name and Title (type or print) Jerry W. Williams, PEPhone Number (205) 978-5070Signature *Jerry W. Williams*Date Signed 07-23-2012

XXIV. RESPONSIBLE OFFICIAL SIGNATURE

This application must be signed by a Responsible Official of the applicant pursuant to ADEM Admin. Code Rule 335-6-.09 who has overall responsibility for the operation of the facility.

"I certify under penalty of law that this document, including technical information and data, the PAP plan, including any SPCC plan, maps, engineering designs, and all other attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the PE and other person or persons under my supervision who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations.

A comprehensive PAP Plan to prevent and minimize discharges of pollution to the maximum extent practicable has been prepared at my direction by a PE for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B, and information contained in this application, including any attachments. I understand that regular inspections must be performed by, or under the direct supervision of, a PE and all appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices identified by the PE must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that the PAP plan must be fully implemented and regularly maintained so that discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitation and other requirements to ensure protection of groundwater and surface water quality. I understand that failure to fully implement and regularly maintain required management practices for the protection of groundwater and surface water quality may subject the permittee to appropriate enforcement action.

I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form.

I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-mining associated benefaction/process pollutants and wastewaters have been fully identified."

Name (type or print) Raymond B. Jones, Jr.Official Title PresidentSignature *Raymond B. Jones, Jr.*Date Signed 7/24/12

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN

Prepared for:

Alabama Department of Environmental Management

CARBON OAK, INC.

THUNDER OAKS MINE

NPDES Permit Application

Prepared By:

TASK Engineering Management Inc.

PO Box 660548

Birmingham, Alabama 35266

205-978-5070

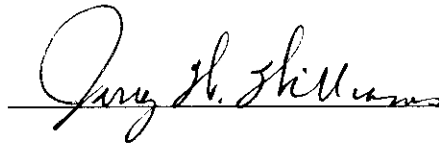
Email jw-task@charter.net

**Spill Prevention Control and Countermeasure Plan
State of Alabama Registered Professional Engineer (PE) Certification**

**Carbon Oak, Inc.
Thunder Oaks Mine
T6S, R8E, Sections 2, 3, 4, 10 & 11
DeKalb County, Alabama**

This is to certify that I, Jerry W. Williams, a Registered Engineer in the State of Alabama, am familiar with the proposed Carbon Oak, Inc., Thunder Oaks Mine, located in DeKalb County, Alabama, and, to the best of my knowledge, all information herein is true and correct, and the Spill Prevention Control and Countermeasure Plan has been prepared in accordance with good engineering practices.

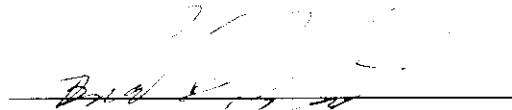
Date: 07-23-2012



Jerry W. Williams
Alabama Registration No. 12739

This plan has been reviewed by the management of Carbon Oak, Inc. and we hereby adopt this SPCC Plan into the operation of our proposed surface mine, Thunder Oaks Mine in DeKalb County, Alabama.

Date: 7-24-12



Raymond B. Jones, Jr., President
Carbon Oak, Inc.

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN

Facility Telephone Number:

Office Phone Number 256-533-3311
Office FAX Number 256-535-9756

Facility Contact and Address:

Raymond B. Jones, Jr., President, Carbon Oak, Inc.
401 Franklin Street
Huntsville, Alabama 35801

1. This facility has never experienced a spill from any fuel or other chemical storage tanks.
2. The containment structures will be located in an area that is not subject to periodic flooding at this highest elevation available.
3. This plan provides for the containment of the following:

<u>No. Of Tanks</u>	<u>Total Capacity</u>	<u>Material</u>
1	10,000 Gal	Diesel Fuel
5	100 Gal	Hydraulic Oil (Double Wall)
20	55 Gal	Motor Oil (Gallon Containers)

The area around the tanks is enclosed by a dike which exceeds the volume capacity of the largest tank in the bermed area by 10%.

4. The nearest surface water of the State is Wolf Creek.
5. The dikes are constructed of impervious material around the tank area. There is a 2" minimum pipe with a manual gate valve, which allows rainwater discharge when it is required. The valve is to remain closed at all times and is to be locked until the diked area collects enough rainwater to require draining. After an inspection of the water to determine if any pollutants are present, the valve will be opened to allow the proper drainage, and then will be immediately closed and re-locked. The containment system is located such that rainwater released through normal de-watering drains to a permitted treatment structure. If pollutants (oil) are present in the rainwater, the pollutants will be removed from the water prior to drainage operations. Pollutants will be disposed of in accordance with existing State and Federal regulations. In addition, a log will be maintained which indicates the date when the containment structure was de-watered, the person conducting the de-watering, and a brief description of the water (i.e., oily sheen, clear, slightly turbid, oily smell, etc.).
6. If a spill should occur, the usable fuel oil within the diked area shall immediately be pumped into tanker trucks for transporting to another storage tank. Oil absorbent material will be kept available to contain any spills. The usable fuel oil and the contaminated soil in the area will be excavated and disposed of in accordance with existing State and Federal Regulations.
7. A written record shall be maintained by the General Mine Superintendent of any spill which occurs, and the actions taken to properly dispose of all spilled material and the cleanup procedures.

8. All unloading of transport vehicles to fill the tanks will meet minimum requirements and regulations established by the Department of Transportation. The tanks will be attended while filling to prevent overflow, and to note visible leaks from seams, gaskets, valves, etc. The General Superintendent of the facility will make periodic inspections of the unloading area to detect signs of minor spills. If spills are evident the contaminated soil will be disposed of in accordance with existing State and Federal regulations. If the spills continue, a paved unloading ramp equipped with an oil-water separator will be constructed.
9. All personnel who are in any way connected with unloading transport vehicles, use of fuel oil, maintenance of the facility, or responsible for storm water drainage and spill cleanup will be made familiar with this plan, and a copy of this plan will be posted and readily available to all personnel at the facility.

Potential Sources of Spills:

- A) Tank Valve Rupture:
Prevention- Properly maintain tanks and keep them in good condition. visually inspect tanks periodically for leaks, and tank foundations for cracks and unusual settling.
- B) Tank Overfill:
Prevention- Truck drivers should follow correct operating procedures when unloading diesel fuel and stay with equipment at all times during unloading operations. Key personnel should know that the truck is in the mine area unloading fuel.
- C) Hose Rupture During Unloading and Spillage From Hoses After Disconnection:
Prevention- Periodic inspection of transport unloading hoses, the replacement of hoses as necessary, and use of the proper hose drainage procedure.

10. In The Event of An Oil Spill Call:

The National Response Center: 1-800-424-8802

The Alabama Emergency Management Agency: 1-800-843-0699

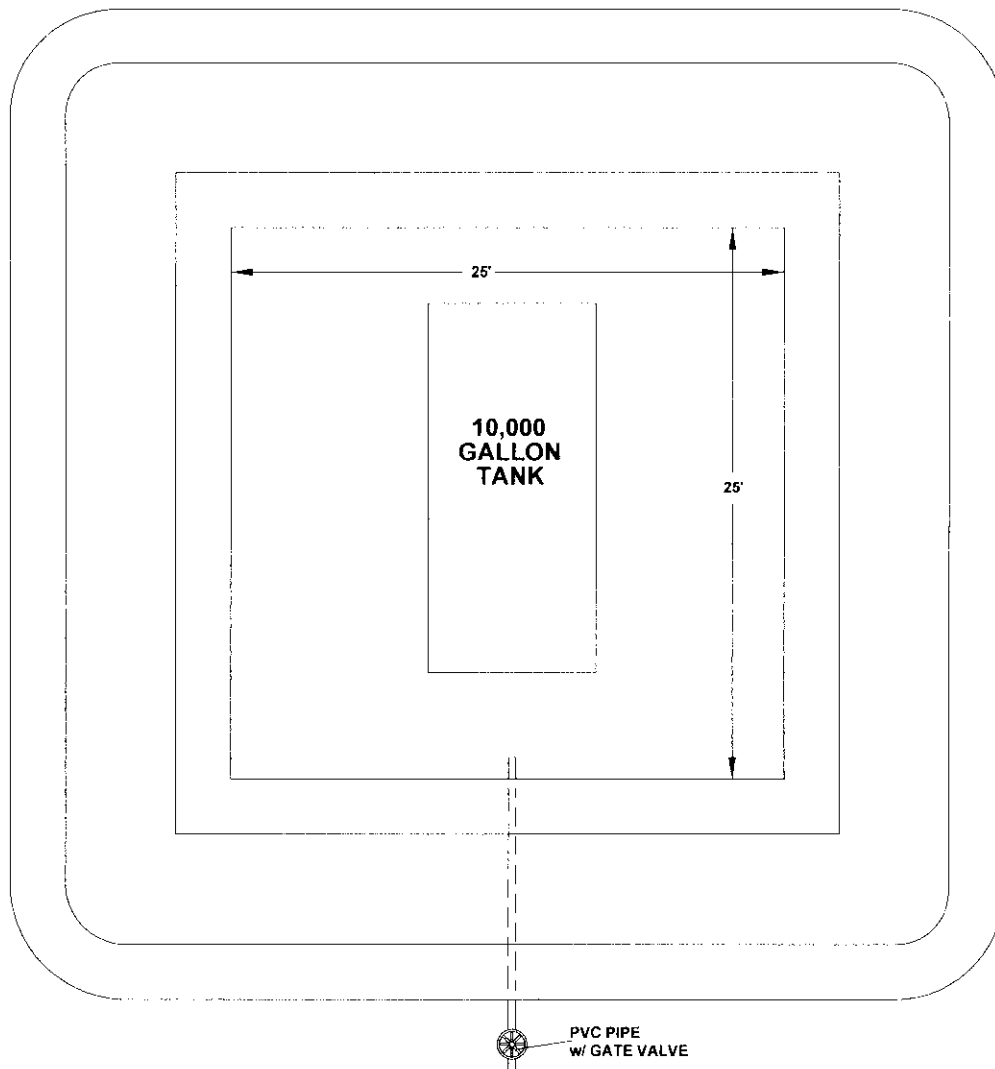
The Alabama Department of Environmental Management 1-334-271-7700

Report the Following Information:

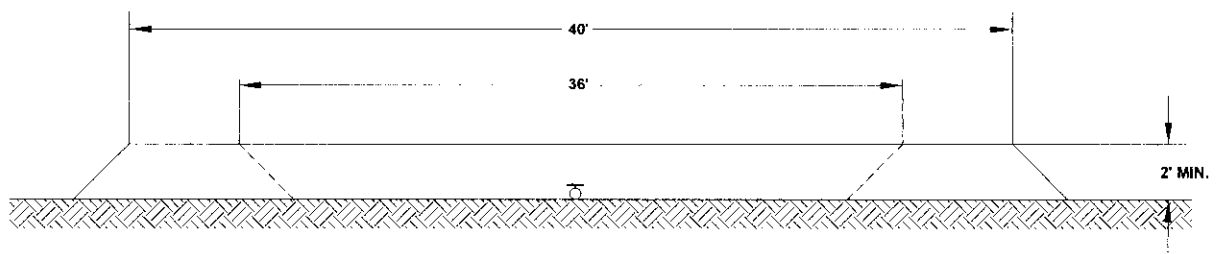
- 1) Name, address, and telephone number of person reporting spill.
- 2) Exact location of facility and spill.
- 3) Company name and NPDES permit number.
- 4) Material spilled.
- 5) Estimated quantity.
- 6) Source of spill.
- 7) Cause of spill.
- 8) Nearest down-stream body of water to receive spill.
- 9) Discuss/advise regarding actions to take for containment and clean up.

11. The coal stockpile area and equipment area at the mine site will be kept gated and locked to prevent vandalism or theft whenever management personnel of Cedar Lake Mining, Inc. are not present.

All key personnel will be fully trained in all aspects of this plan, the proper use of personal protective gear, and all reporting and record keeping procedures. All non-key personnel will be made familiar with the plan and will be instructed on personal safety.



PLAN VIEW



ELEVATION VIEW

SHEET

1 OF 2

SCALE

NONE

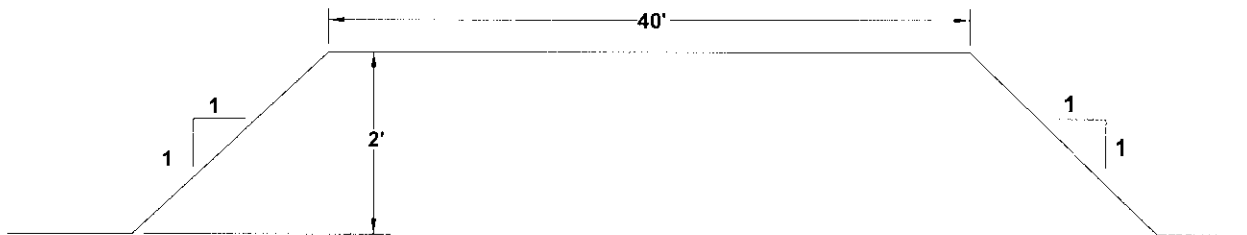
TITLE

SPILL PREVENTION PLAN
TYPICAL CONTAINMENT BERM DETAIL

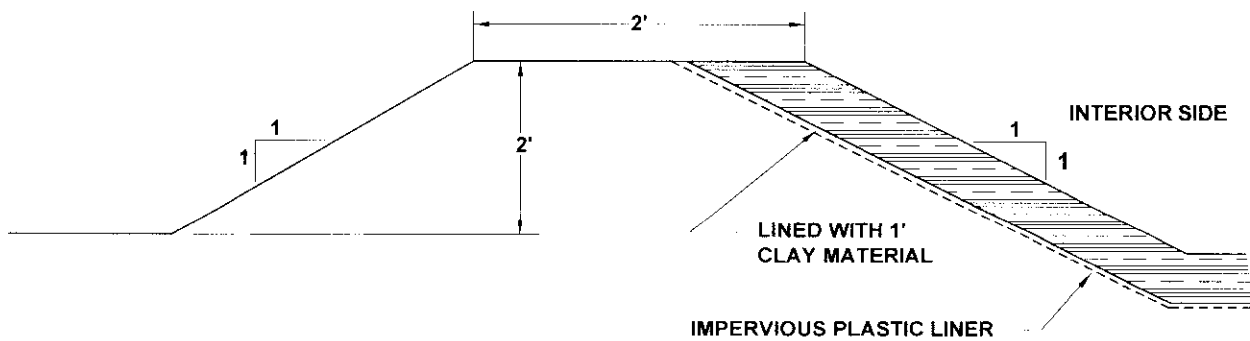
TASK EMI
CONSULTING ENGINEERS
P.O. BOX 660548
BIRMINGHAM, ALABAMA 35266
(205) 978-5070

**BERM DESIGN
TYPICAL SECTIONS**

FRONT VIEW



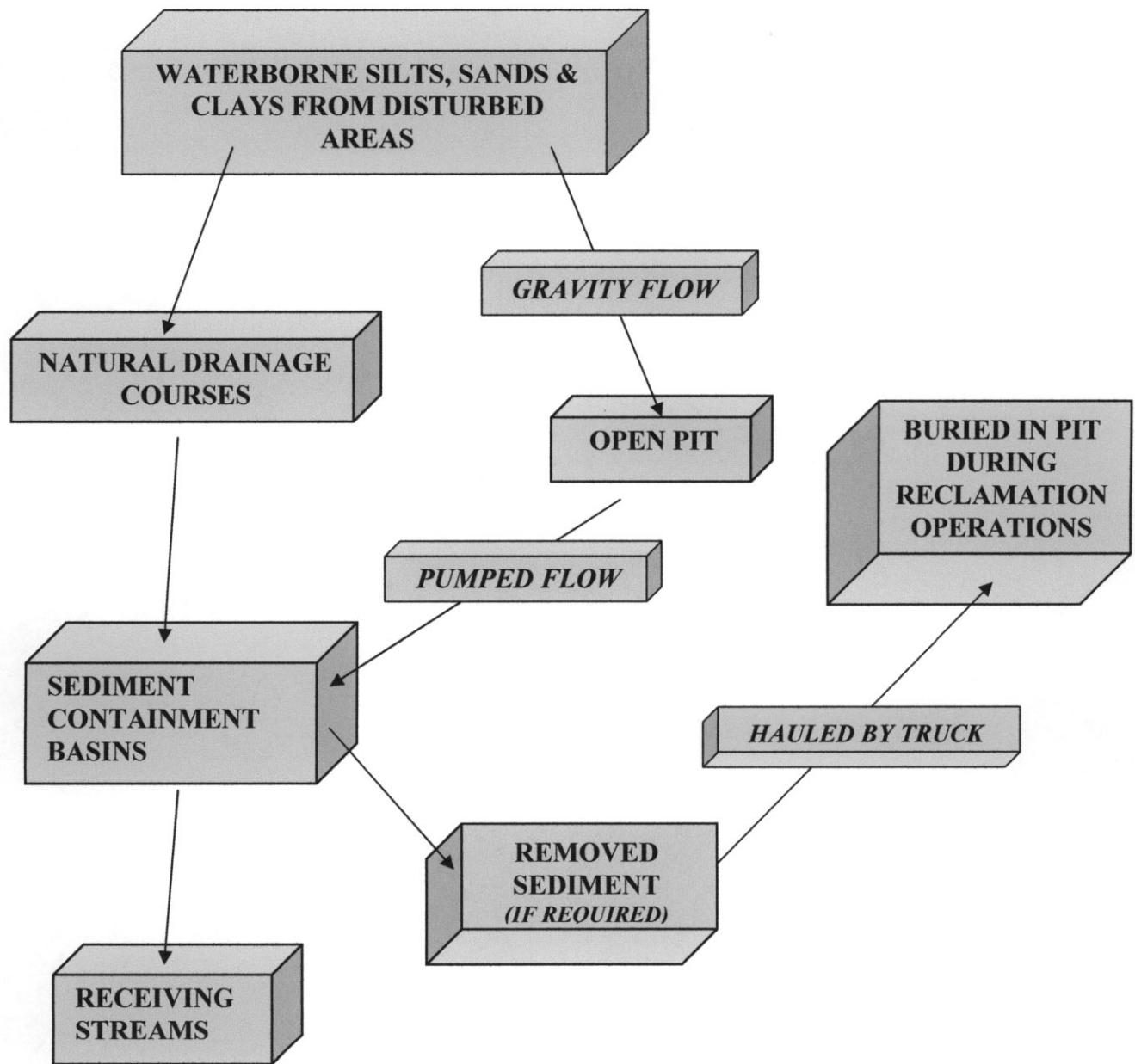
SIDE VIEW



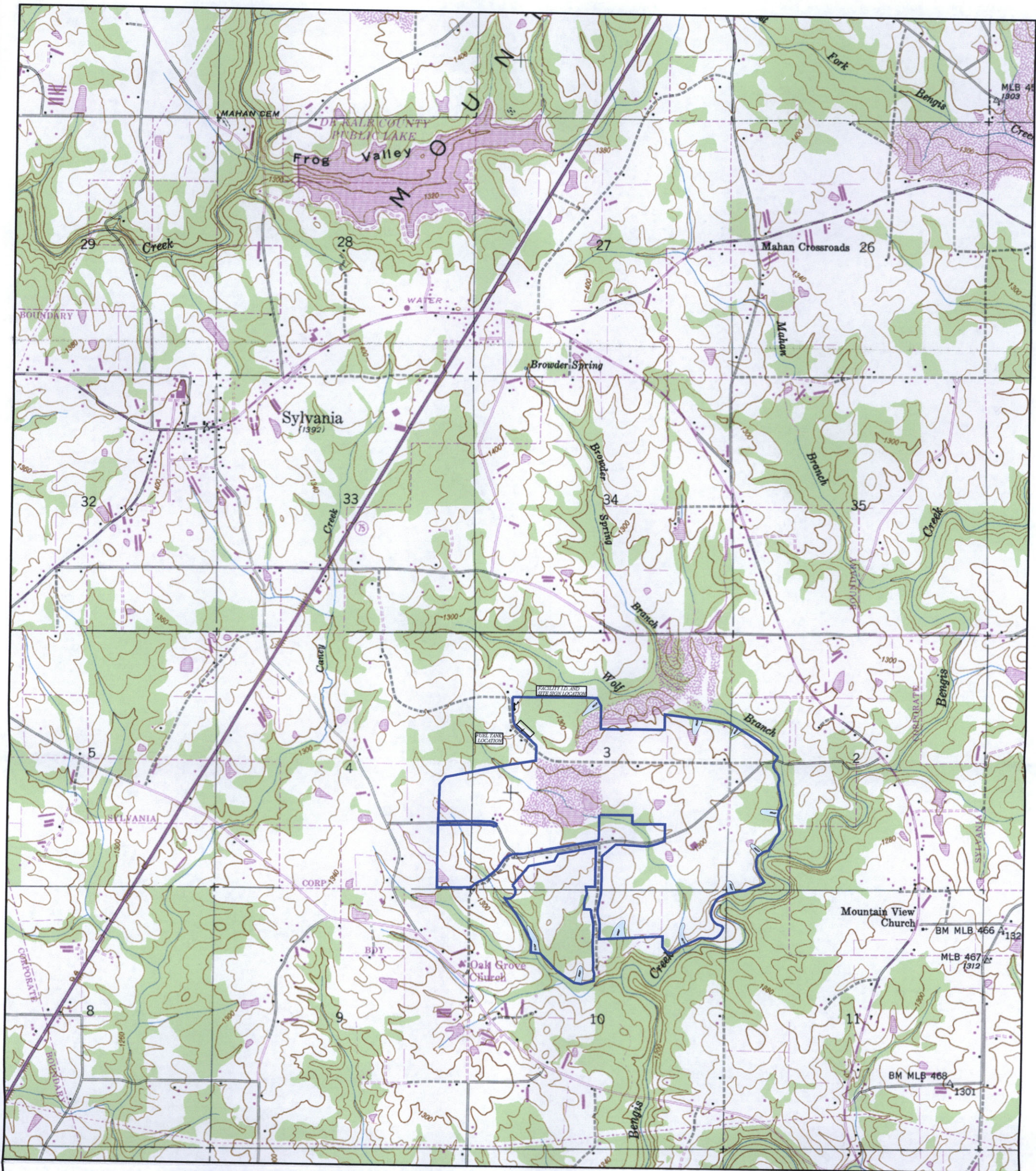
NOT TO SCALE

SHEET	SCALE	TITLE
2 OF 2	NONE	SPILL PREVENTION PLAN TYPICAL CONTAINMENT BERM SECTION

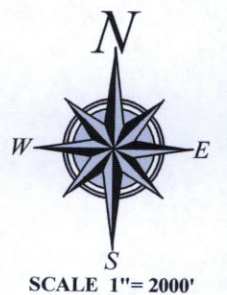
TASK EMI
CONSULTING ENGINEERS
P.O. BOX 660548
BIRMINGHAM, ALABAMA 35266
(205) 978-5070



**SCHEMATIC DIAGRAM
OF
WASTE CYCLE**



GENERAL SITE LOCATION & MINE BOUNDARIES
SECTIONS 2, 3, 4, 10 & 11
TOWNSHIP 6 SOUTH, RANGE 8 EAST
DEKALB COUNTY, ALABAMA



TOTAL PROPOSED DISTURBED AREA - 596 ACRES

BASE MAP: SYLVANIA & DUGOUT VALLEY U.S.G.S. QUADRANGLE MAPS

PERMIT BOUNDARY
SEDIMENT BASIN / OUTFALL

SHEET	SCALE	CLIENT / MINE	
1 OF 1	1" = 2000'	CARBON OAK, INC. THUNDER OAKS MINE	TASK EMI CONSULTING ENGINEERS P.O. BOX 660548 BIRMINGHAM, ALABAMA 35266 (205) 978-5070

TASK ENGINEERING MANAGEMENT INC.

**PO Box 660548
BIRMINGHAM, ALABAMA 35266
(205) 978-5070**

July 25, 2012

Ms. Catherine McNeill
Wastewater & Mining Section
Field Operations Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

LETTER OF TRANSMITTAL

Re: Carbon Oak, Inc.
Thunder Oaks Mine
Application for NPDES Permit

JUL 30 2012

Dear Ms. McNeill:

On behalf of Carbon Oak, Inc. please find attached a NPDES Individual Permit Application Packet for an initial issuance on their proposed Thunder Oaks Mine located in DeKalb County, Alabama.

We are also enclosing our clients check in the amount of \$4,130.00 for the ADEM permit processing fee.

If you have any questions or need additional information, please call us at (205)978-5070.

Sincerely,



Jerry W. Williams,
Ala. PE #12739

COAL MINING AND/OR PREPARATION PLANT APPLICATION METALS, CYANIDE, AND TOTAL PHENOLS OUTFALL DATA

SRDS#	AL0081817	APPLICANT	Carbon Oak, Inc.		FACILITY	Thunder Oak Mine											
OUTFALL #	• See Note	DATE SAMPLED	4/3/2014	in-pond	Discharge	SUBSTANTIALLY IDENTICAL OUTFALLS	Proposed Basins 1 thru 12	DESCRIPTION: Surface Coal Mining									
Please supply the following information separately for every P or F outfall evaluated/tested. If necessary, attach extra sheets. If you are a coal facility, mark "X" in appropriate column for ALL listed metals, cyanides, and total phenols. If the outfall is existing, you must provide the results of at least one representative analysis for the pollutant for a substantially identical existing outfall at the facility. If the outfall is proposed, you must either submit at least one representative analysis for a substantially identical existing outfall at the facility, or if not available, at least one representative analysis for a substantially identical outfall at another similar facility.																	
MARK "X"																	
POLLUTANT AND CAS NO. (if available)	IN-STREAM EXISTING OUTFALL	RECEIVED PRESENT PROPOSED OUTFALL	RECEIVED ABSENT PROPOSED OUTFALL	MAXIMUM DAILY VALUE		MAXIMUM 30 DAY VALUE (if available)		LONG TERM AVG. VALUE (if available)	# of Analyses	Frequency of Discharge (weekly/monthly/annually)	40 CFR Part 136 EPA Approved Method	Method Detection Limit (ppt/ug/L)	Residue Water % (Q10 Flow Q25)	24-hourly Leachability Analysis (mg/L Calc Cd)	Optional Discharge Flow (CFS)	Optional Background Instream Concentration (ug/L)	Optional Instream Flow (CFS)
				CONCENTRATION (ug/L)	MASS (lbs)	CONCENTRATION (ug/L)	MASS (lbs)										
MM Mercury, Dissolved (15190-82)			X	N/D					1	Precip. Based	EPA 200.8	1	0.018				
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MM Mercury, Dissolved (15190-82)			X	N/D					1	Precip. Based	EPA 200.8	1	0.018				
MM Mercury, Dissolved (15190-82)			X	N/D					1	Precip. Based	EPA 200.8	1	0.018				
MM Mercury, Dissolved (15190-82)			X	N/D					1	Precip. Based	EPA 200.8	1	0.018				
MM Mercury, Dissolved (15190-82)			X	N/D					1	Precip. Based	EPA 200.8						

TASK Engineering Management Inc.

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CLIENT: Carbon Oak, Inc.
401 Franklin Street
Huntsville, Alabama 35801
Phone 256.535.9750 Fax 256.535.9756

Date Sampled: 4/3/2014
Sampled By: TASK Engineering
SITE/MINE: Thunder Oaks Mine/AL00081817
Location: DeKalb County, Alabama
Description: SW-1

STREAM SAMPLE ANALYSIS

POLLUTANT and CAS NO. (If available)	CONCENTRATION (µg/L)	40 CFR Part 136 EPA Approved Method Analyses Used	MINIMUM LEVEL (µg/L)	Date Analyzed	Analyzing Source
1M Antimony, Dissolved (7440-36-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
2M Arsenic, Dissolved (7440-38-2)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
3M Beryllium, Dissolved (7440-41-7)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
4M Cadmium, Dissolved (7440-43-9)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
5M Chromium, Dissolved (7440-47-3)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
6M Copper, Dissolved (7440-50-8)	BDL	EPA 200.8	1.0	04/18/14	ESC LABORATORY
7M Lead, Dissolved (7439-92-1)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
8M Mercury, Total (7439-97-8)	BDL	EPA 245.2	0.067	04/30/14	GEL LABORATORIES
9M Nickel, Dissolved (7440-02-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
10M Selenium, Dissolved (7782-49-2)	BDL	EPA 200.8	1.0	04/16/14	ESC LABORATORY
11M Silver, Dissolved (7440-22-4)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
12M Thallium, Dissolved (7440-28-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
13M Zinc, Dissolved (7440-66-6)	BDL	EPA 200.8	10	04/17/14	ESC LABORATORY
14M Cyanide, Dissolved (57-12-5)	BDL	SM4500-CN-E	10	04/15/14	ESC LABORATORY
15M Phenols, Dissolved	BDL	EPA 420.1	40	04/17/14	ESC LABORATORY

BDL= Below Detectable Limit

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Date Sampled: 4/3/2014
Sampled By: TASK Engineering
SITE/MINE: Thunder Oaks Mine/AL00081817
Location: DeKalb County, Alabama
Description: SW-2

STREAM SAMPLE ANALYSIS

POLLUTANT and CAS NO. (If available)	CONCENTRATION (µg/L)	40 CFR Part 136 EPA Approved Method Analyses Used	MINIMUM LEVEL (µg/L)	Date Analyzed	Analyzing Source
1M Antimony, Dissolved (7440-36-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
2M Arsenic, Dissolved (7440-38-2)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
3M Beryllium, Dissolved (7440-41-7)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
4M Cadmium, Dissolved (7440-43-9)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
5M Chromium, Dissolved (7440-47-3)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
6M Copper, Dissolved (7440-50-8)	BDL	EPA 200.8	1.0	04/18/14	ESC LABORATORY
7M Lead, Dissolved (7439-92-1)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
8M Mercury, Total (7439-97-8)	BDL	EPA 245.2	0.067	04/30/14	GEL LABORATORIES
9M Nickel, Dissolved (7440-02-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
10M Selenium, Dissolved (7782-49-2)	BDL	EPA 200.8	1.0	04/16/14	ESC LABORATORY
11M Silver, Dissolved (7440-22-4)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
12M Thallium, Dissolved (7440-28-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
13M Zinc, Dissolved (7440-66-6)	BDL	EPA 200.8	10	04/17/14	ESC LABORATORY
14M Cyanide, Dissolved (57-12-5)	BDL	SM4500-CN-E	5	04/15/14	ESC LABORATORY
15M Phenols, Dissolved	BDL	EPA 420.1	40	04/17/14	ESC LABORATORY

BDL= Below Detectable Limit

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Phone 256.535.9750 Fax 256.535.9756

Date Sampled: 4/3/2014
Sampled By: TASK Engineering
SITE/MINE: Thunder Oaks Mine/AL00081817
Location: DeKalb County, Alabama
Description: SW-3

STREAM SAMPLE ANALYSIS

POLLUTANT and CAS NO. (If available)	CONCENTRATION (µg/L)	40 CFR Part 136 EPA Approved Method Analyses Used	MINIMUM LEVEL (µg/L)	Date Analyzed	Analyzing Source
1M Antimony, Dissolved (7440-36-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
2M Arsenic, Dissolved (7440-38-2)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
3M Beryllium, Dissolved (7440-41-7)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
4M Cadmium, Dissolved (7440-43-9)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
5M Chromium, Dissolved (7440-47-3)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
6M Copper, Dissolved (7440-50-8)	BDL	EPA 200.8	1.0	04/18/14	ESC LABORATORY
7M Lead, Dissolved (7439-92-1)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
8M Mercury, Total (7439-97-8)	BDL	EPA 245.2	0.067	04/30/14	GEL LABORATORIES
9M Nickel, Dissolved (7440-02-0)	3.7	EPA 200.8	1.0	04/17/14	ESC LABORATORY
10M Selenium, Dissolved (7782-49-2)	BDL	EPA 200.8	1.0	04/16/14	ESC LABORATORY
11M Silver, Dissolved (7440-22-4)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
12M Thallium, Dissolved (7440-28-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
13M Zinc, Dissolved (7440-66-6)	BDL	EPA 200.8	10	04/17/14	ESC LABORATORY
14M Cyanide, Dissolved (57-12-5)	BDL	SM4500-CN-E	5	04/15/14	ESC LABORATORY
15M Phenols, Dissolved	BDL	EPA 420.1	40	04/17/14	ESC LABORATORY

BDL= Below Detectable Limit

TASK Engineering Management Inc.

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CLIENT: Carbon Oak, Inc.
401 Franklin Street
Huntsville, Alabama 35801
Phone 256.535.9750 Fax 256.535.9756

Date Sampled: 4/3/2014
Sampled By: TASK Engineering
SITE/MINE: Thunder Oaks Mine/AL00081817
Location: DeKalb County, Alabama
Description: SW-4

STREAM SAMPLE ANALYSIS

POLLUTANT and CAS NO. (If available)	CONCENTRATION (µg/L)	40 CFR Part 136 EPA Approved Method Analyses Used	MINIMUM LEVEL (µg/L)	Date Analyzed	Analyzing Source
1M Antimony, Dissolved (7440-36-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
2M Arsenic, Dissolved (7440-38-2)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
3M Beryllium, Dissolved (7440-41-7)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
4M Cadmium, Dissolved (7440-43-9)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
5M Chromium, Dissolved (7440-47-3)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
6M Copper, Dissolved (7440-50-8)	BDL	EPA 200.8	1.0	04/18/14	ESC LABORATORY
7M Lead, Dissolved (7439-92-1)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
8M Mercury, Total (7439-97-8)	BDL	EPA 245.2	0.067	04/30/14	GEL LABORATORIES
9M Nickel, Dissolved (7440-02-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
10M Selenium, Dissolved (7782-49-2)	BDL	EPA 200.8	1.0	04/16/14	ESC LABORATORY
11M Silver, Dissolved (7440-22-4)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
12M Thallium, Dissolved (7440-28-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
13M Zinc, Dissolved (7440-66-6)	BDL	EPA 200.8	10	04/17/14	ESC LABORATORY
14M Cyanide, Dissolved (57-12-5)	BDL	SM4500-CN-E	5	04/15/14	ESC LABORATORY
15M Phenols, Dissolved	BDL	EPA 420.1	40	04/17/14	ESC LABORATORY

BDL= Below Detectable Limit

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Date Sampled: 4/3/2014
Sampled By: TASK Engineering
SITE/MINE: Thunder Oaks Mine/AL00081817
Location: DeKalb County, Alabama
Description: SW-5

STREAM SAMPLE ANALYSIS

POLLUTANT and CAS NO. (If available)	CONCENTRATION (µg/L)	40 CFR Part 136 EPA Approved Method Analyses Used	MINIMUM LEVEL (µg/L)	Date Analyzed	Analyzing Source
1M Antimony, Dissolved (7440-36-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
2M Arsenic, Dissolved (7440-38-2)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
3M Beryllium, Dissolved (7440-41-7)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
4M Cadmium, Dissolved (7440-43-9)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
5M Chromium, Dissolved (7440-47-3)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
6M Copper, Dissolved (7440-50-8)	BDL	EPA 200.8	1.0	04/18/14	ESC LABORATORY
7M Lead, Dissolved (7439-92-1)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
8M Mercury, Total (7439-97-8)	BDL	EPA 245.2	0.067	04/30/14	GEL LABORATORIES
9M Nickel, Dissolved (7440-02-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
10M Selenium, Dissolved (7782-49-2)	BDL	EPA 200.8	1.0	04/16/14	ESC LABORATORY
11M Silver, Dissolved (7440-22-4)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
12M Thallium, Dissolved (7440-28-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
13M Zinc, Dissolved (7440-66-6)	BDL	EPA 200.8	10	04/17/14	ESC LABORATORY
14M Cyanide, Dissolved (57-12-5)	BDL	SM4500-CN-E	5	04/15/14	ESC LABORATORY
15M Phenols, Dissolved	BDL	EPA 420.1	40	04/17/14	ESC LABORATORY

BDL= Below Detectable Limit

TASK Engineering Management Inc.

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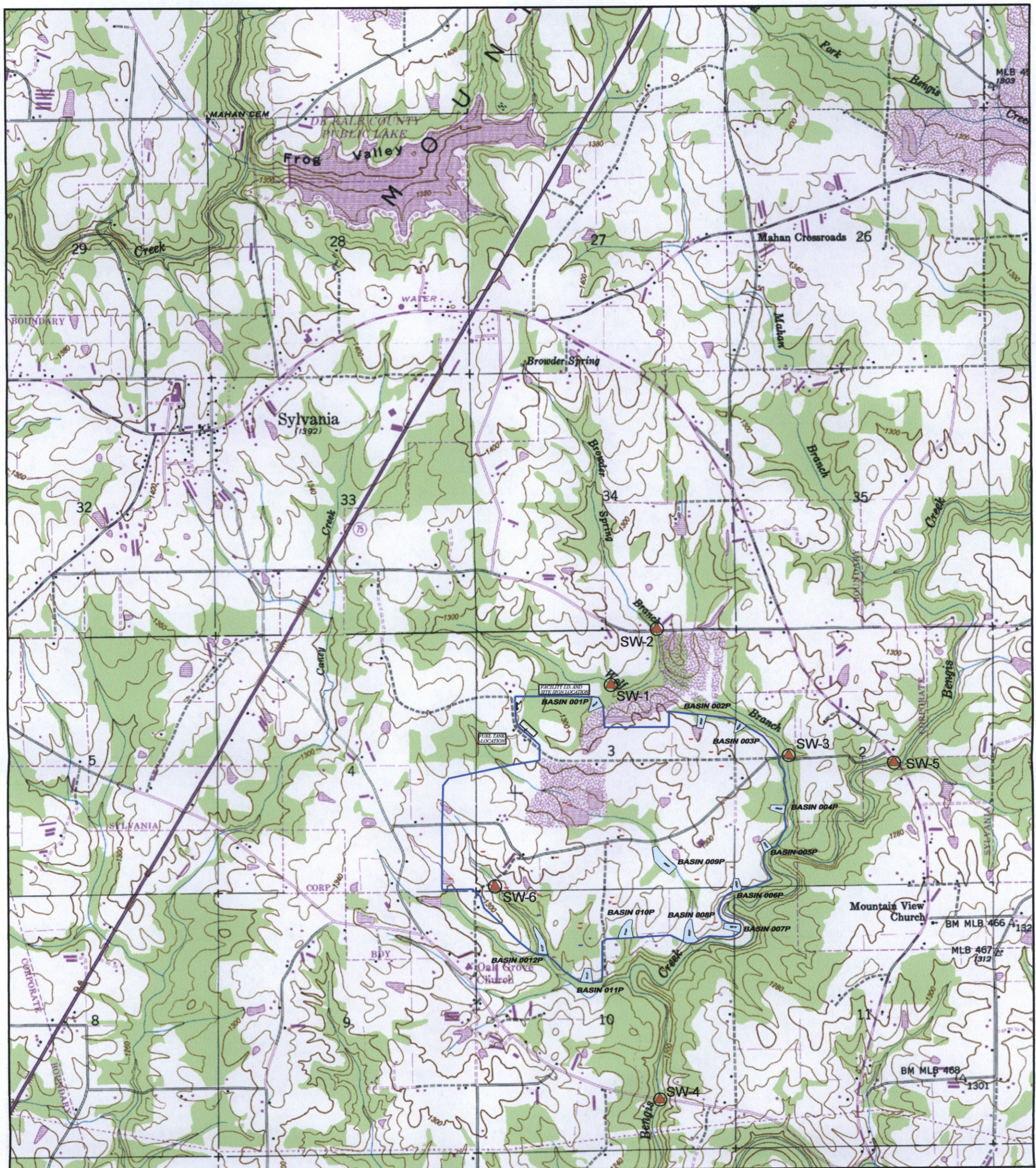
CLIENT: Carbon Oak, Inc.
401 Franklin Street
Huntsville, Alabama 35801
Phone 256.535.9750 Fax 256.535.9756

Date Sampled: 4/3/2014
Sampled By: TASK Engineering
SITE/MINE: Thunder Oaks Mine/AL00081817
Location: DeKalb County, Alabama
Description: SW-6

STREAM SAMPLE ANALYSIS

POLLUTANT and CAS NO. (If available)	CONCENTRATION (µg/L)	40 CFR Part 136 EPA Approved Method Analyses Used	MINIMUM LEVEL (µg/L)	Date Analyzed	Analyzing Source
1M Antimony, Dissolved (7440-36-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
2M Arsenic, Dissolved (7440-38-2)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
3M Beryllium, Dissolved (7440-41-7)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
4M Cadmium, Dissolved (7440-43-9)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
5M Chromium, Dissolved (7440-47-3)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
6M Copper, Dissolved (7440-50-8)	BDL	EPA 200.8	1.0	04/18/14	ESC LABORATORY
7M Lead, Dissolved (7439-92-1)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
8M Mercury, Total (7439-97-8)	BDL	EPA 245.2	0.067	04/30/14	GEL LABORATORIES
9M Nickel, Dissolved (7440-02-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
10M Selenium, Dissolved (7782-49-2)	BDL	EPA 200.8	1.0	04/16/14	ESC LABORATORY
11M Silver, Dissolved (7440-22-4)	BDL	EPA 200.8	0.5	04/17/14	ESC LABORATORY
12M Thallium, Dissolved (7440-28-0)	BDL	EPA 200.8	1.0	04/17/14	ESC LABORATORY
13M Zinc, Dissolved (7440-66-6)	BDL	EPA 200.8	10	04/17/14	ESC LABORATORY
14M Cyanide, Dissolved (57-12-5)	BDL	SM4500-CN-E	5	04/15/14	ESC LABORATORY
15M Phenols, Dissolved	BDL	EPA 420.1	40	04/17/14	ESC LABORATORY

BDL= Below Detectable Limit






NPDES PERMIT MAP
SECTIONS 2, 3, 4, 10 & 11
TOWNSHIP 6 SOUTH, RANGE 8 EAST
DEKALB COUNTY, ALABAMA

NPDES PERMIT #AL0081817
SUBMITTED TO ADEM 07-26-2012
STATUS - PENDING

TOTAL PROPOSED DISTURBED AREA - 655 ACRES

BASE MAP: SYLVANIA & DUGOUT VALLEY U.S.G.S. QUADRANGLE MAPS



-  **PERMIT BOUNDARY**
-  **SEDIMENT BASIN / OUTFALL**
-  **SW-3 SURFACE WATER MONITORING SITE**

SHEET

SCALE

CLIENT / MINE

1 OF 1

1" = 2000'

CARBON OAK, INC.
THUNDER OAKS MINE

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